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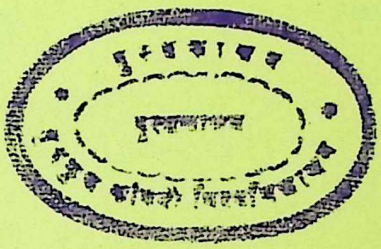

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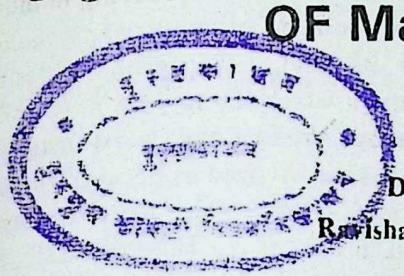
Organizational Commitment As A Function OF Managerial Respect



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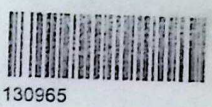

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In the present study an attempt has been made to explore the posssible effect of managerial respect and job status on organizational commitment. One hundred employees drawn equally from officer and clerk levels of Bhilai Steel Plant, Bhilai were used as final sample. Organizational cammitment was measured by Organizational Commmitment Questionnaire developed by Porter, et al, and managerial respect by Drehmer & Grossman's Managerial Respect Inventory. A 2×2 factorial design was used to analyse the data. Organizational Commitment was found to be positively affected by the above two variables but their interactian effect was found to be insignificant. It was discussed that high level of managerial respect and job status is necessary for organizational commitment.

The concept of organizational commitment has received an intense attention in the industrial and organizational world. It plays very important role in the success and progress of organization as (i) it is highly related with organizational effectiveness (Schien, 1971 : Steers, 1975 and Angle & Perry, 1981), (ii) highly committed employee may perform better than low committed one (Mowdays Porter & Dubin, 1974), and (iii) it is generally a better predictor of turn-over than job satisfaction (Koch & Steers, 1976 ; Porter *et al.*, 1974). These findings have been proved to possess very useful and important implication for both organizational theory and practice of management.

The term 'organizational commitment' has been defined by various authors in various ways. Buchanan (1974) has reviewed various meanings of concepts of commitment which includes– (1) willingness of an employee (member) to exert high levels of efforts on behalf of organization, (2) strong desire to stay with the organization, (3) degree of belongingness or loyality to the organization, (4) acceptance of major goals and values of organization, and (5) positive evaluation of the organization. According to Porter *et. al.* (1974) organizational commitment has three major components : (1) a strong belief and acceptance of

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the organizational goals, (2) a willingness to exert considerable effort on behalf of the organization, and (3) a definite desire to maintain organizational membership. Various studies within this framework have shown that commitment is a predictor of employee-retention (Porter *et al.*, 1974 ; Koch & Steers, 1976) and effort and performance (Mowday, Porter and Dubin, 1974 ; Mowday, Steer and Porter, 1979).

Employee-employer relationship is the most important human relationship in industries and organization. It is the centre around which the problems of industrial psychology move. Any industry or organization cannot achieve its goal, if that relationship is not healthy. Drehmer & Grossman (1984 conducted a study in which the subjects were asked to describe specific behaviour and incidents that characterized the best and worst managers they never had. It was found that best managers were characterized as persons who displayed respect and trust in their subordinates. It was also noticed that worst managers were described as being insensitive to their personal needs of the subordinates. The employers' or the superiors' respectful demeanor towards their subordinates has been named as 'Managerial Respect'.

Considering the nature of organizational commitment and managerial respect, there seems to be a close relationship between the two. Many factors affecting organizational commitment have been studied by various investigators. Notable among them are (Lee, 1971 ; Scheldon, 1971 ; Hrebiniak, 1974 ; Angle & Perry, 1981), sex (Angle & Perry, 1981), education (Koch & Steers, 1976 ; Stevens, Beyer & Trice, (1978), apportunities for achievement (Brown, 1969 ; Hall, Schneider & Nygren, 1970 ; Patchen, 1970), role tension (Hrebiniak & Alutto, 1972), central life interest (Dubin, Champoux and Porter, 1975), job characteristics and satisfaction (Stone and Porter, 1975), job challange (Hall and Schneider, 1972, Buchanan, 1979) opportunities for social interaction (Scheldon, 1971), amount of feedback provided on the job (Ross and Zander, 1957 ; Porter and Steer, 1973), group attitude towards organization (Buchanan, 1974), Patchen, 1974 ; Hrebiniak, 1974), and perception of personal investment and personal importance to an organization (Patchen, 1970 ; Sheldon, 1971 ; Buchanan, 1974) but the effect of managerial respect which appears to be a very important factor to affect organizational commitment has not been studied so far. Therefore, the present study was undertaken to evaluate the effect of managerial respect on organizational commitment. It was hypothesized that employees having high degree of managerial respect and job status will show greater degree of organizational commitment than the persons having low level of managerial respect and job status.

METHODOLOGY

Subjects :

One hundred male employees (50 officers and 50 clerks) selected randomly from Bhilai Steel Plant, Bhilai were used as the main sample of the present study.

Instruments

(i) Organizational Commitment Questionnaire developed by Porter *et. al.* (1974) was used to measure employees' commitment. The scale consists of 15 items. The scoring for present study was done on 5-point scale ranging from fully agree to fully disagree.

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Scores of 5 to 1 were assigned to each of the response category. Items 3, 7, 9, 11, 12 and 15 were reversed items and hence reversed scoring for the above items were done. Higher score indicated the high organizational commitment whereas lower score was the indicator of low organizational commitment.

(ii) Managerial Respect Inventory developed by Drehmer and Crossman (1984) was used to ascertain the level of managerial respect. The scale consisted of 26 items and the respondent has to respond these items in 'yes' or 'no'. Positive and negative items were given 1 and 0 scores respectively. Higher score indicated high managerial respect.

Procedure :

The Managerial Respect Inventory was administered on 200 employees (100 officers and 100 clerks) selected randomly from Steel Plant. Then 25 employees (each from officer's and Clerk's levels) scoring high from the top and 25 employees scoring low from the bottom were considered as the subjects of high and low managerial respect groups respectively. These employees were then administered the organizational commitment questionnaire. Thus, the two types of scores i.e., organizational commitments score and managerial respect score were obtained for the present study.

RESULTS AND DISCUSSION

For the analysis of data 2×2 factorial design was used. The independent variables, i.e. Managerial Respect and Status have been taken on two levels. Managerial Respect had high and low level and Status had also two levels as officers and clerks. Scores on Organizational Commitment comprised the dependent variable. The N in each cell was 25. The average Organizational Commitment scores of the officers and clerks of high and low Managerial Respect groups are shown in Table-1.

Table – 1 : Average Organizational Commitment scores of Officers and Clerks of high and low Managerial Respect groups.

Managerial Respect	Status		Mean
	Officer	Clerk	
High	53·50	48·35	50·92
Low	47·38	45·40	46·39
Mean	50·44	46·87	48·65

The analyses of data with 2×2 factorial design indicated the results given in Table-2.

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Table – 2 : Analysis variance for 2×2 factorial for the affects of Managerial Respect and Status upon Organizational Commitment.

Source	SS	df	Variance	F-ratio	Level of Significance
Groups	410·42	1	410·42	78·77	·01
Status	257 76	1	257·76	49 47	·01
Interaction	18·38	1	18·38	3·52	NS
Within Set	395·97	76	5·21		

The first problem in the present study was to find out the effect of Managerial Respect on Organizational Commitment. The F-ratio for high and low managerial respect group is significant at ·01 level (Table 2) which shows that the degree of Managerial Respect affects the Organizational Commitment of the employees i.e., the employees who receive more Managerial Respect show more Organizational Commitment (average organizational commitment score=50·92) whereas the employees who receive lesser Managerial Respect show lesser Organizational Commitment (average Organizational Commitment score=46·39). Organizational Commitment has been defined as (i) a strong belief in and acceptance of the organizational goal (ii) a willingness to exert considerable effort on behalf of the organization and (iii) a definit desire to maintain organizational membership (Porter *et al.* 1974) and these types of feelings seem to occur only when employees get respect and trust from their employer or superior. That is why the employees having more Managerial Respect have shown more Organizational Commitment. Thus, the hypothesis that the employees having more Managerial Respect will show more Organizational Commitment gets an emperical support.

The second problem to be studied in the present research is to evaluate the effect of Status on Organizational Commitment. The F-ratio for the two level of status i.e. officers and clerks has been found to be significant beyond any chance (Table 2). It shows that the officers show more Organizational Commitment (average Organizational Commitment score ±50·44) than the clerks (average Organizational Commitment score ±46·87). The obtained result may be explained in the light the fact that of the person having high status possess more responsibilities than the persons having low status and to perform their responsibilities properly, they have to develop high commitment to their organization failing which they will not be successful. Thus, the hypothesis that the officers will show more Organizational Commitment than the clerks seems to be tanable.

The interaction effect between the two variables, i.e., Managerial Respect and Status was found to be insignificant (Table 2) which implies that the two factors do not affect the Organizational Commitment jointly though they have affected the Organizational Commit-

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ment when tested separately. However, the obtained insignificant F-value indicates that officers and clerks of high and low Managerial Respect group do not differ significantly in their Organizational Commitment.

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Moral Concepts In Relation To Different Types Of Interpersonal Relationship

Dr. Saroj Kothari
Govt. Arts and Commerce College, Indore

The present study is aimed to find out the relationship between the interaction styles of the child and his moral concept development. For this study 1249 students of VII grade served as subjects The Moral Concepts Development Test (MCDT) and childrens interpersonal Relationship proforma (CIRP) were administered to all the students. The chi-square test was used Results showed that better the interpersonal relationship of the child with the parents, teachers and peers, the better is the development of the moral concepts.

Introduction :

In the present study an attempt has been made to find out the relationship between the interacration style of the child and his moral concept development. Hartshorne and others (1930) found a correlation of 0·55 between the ideas of parents and their children in resepct of the moral concept of 'Wrong and Right'. Piaget (1932) has rightly remarked that in the begining morality develops as a result of 'adult constraint'. Groves (1940) is also of the opinion that the most important factor in the learning and development of moral concepts is the examples set by the parents. According to Justin (1950), Dukes (1955), Marris and Jones (1955) and Lehmann (1958) parents and other family members influence the moral concepts of the child in four ways viz., (i) as a model behaviour for the child to imitate, (ii) by teaching the child to behave in a socially desirable manner, (iii) by teaching the child to recognise the severity of his wrong doing and (iv) by motivating the child to do right things.

Not only parents, but teachers also influence the development of the moral concepts among their students. Moustakes (1956) opined that if the teacher does not like the pupil or if his behaviour falls below the moral standard of the pupil, then there will be little motivation for the child to conform to teacher approval standards. Hymes (1957) found that the behaviour of the child is greatly influenced by the relationship of the child with his teachers and classmates.

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The third type of interpersonal relationship is with peers. Havinghurst and others (1949) observed that children tend to imitate glamorous adults outside the family as they grow older. Similarly, Jones (1954) found that if the child fails to win peer acceptance at school, he is likely to turn against the school and reject the moral concepts of peers.

Hypotheses :

This investigation aims to test the following hypotheses :

1. The variable of child's interpersonal relationship with his/her parents does not have any relationship with the existing moral concepts of his child of the VII grade.
2. The variable of child's interpersonal relationship with his/her teachers does not have any relationship with the existing moral concepts of his students of the VI grade.
3. The variable of child's interpersonal relationship with his/her peers does not have any relationship with the existing moral concepts of the child of the VII grade.

Sample :

A sample of 1249 students of VII grade was selected on stratified random sample basis for the present study.

Tools :

The Moral Concept Development Test (MCDT) and the children's Interpersonal Relationship proform (CIRP) were used as tools to study the relationship between development of moral concepts and interpersonal relationship of the chid with his parents, teachers and peers.

Results and discussion :

Chi Square test was used to measure the impact of children's Interpersonal relationships with his parents, teachers and peers upon the development of his moral concepts. The results of the Chi-square Test are presented in Table 1.

Table 1 Chi Square Test To Judge Various Types of Interpersonal Relationships of the Child

S. No.	*Statements*	*Chi-square*	*Remarks*
	Statements For Judging the Interpersonal Relationship of the Child With Parents.		
1.	My parents encourage me to read educational literature	8 44	NS
2.	My parents encourage me to think independently.	10·02	*
3.	My parents love me very much and fulfil my desires.	44·36	**
4.	My parents deslike me and always scold me	103 32	**
5.	My parents always expect disciplined behaviour from me	17 43	*

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	Statements For Judging Interpersonal Relation of the Child With 'Teachers.'		
6.	My teachers encourage me to take part in extra curricular activities along with my studies.	23·84	**
7.	Teachers themselves solve my problems.	8 07	NS
8.	Teachers help me properly in solving my difficulties.	40·29	**
9.	Teachers criticise me on my mistake in the presence of my classfellows.	59·84	**
10.	My teachers do not compel me to accept the ancient conventions, they instead motivate me for the development of my ability.	26·74	**
	Statements for Judging the Interpersonal Relationship of the Child with 'Peers'.		
11.	The reason for my each behaviour is asked in peers group.	49·48	**
12.	Classmates dislike to play with me.	93·55	**
13.	I am motivated to work in the best manner when I am encouraged by classmates to do that work.	11·20	**
14.	I am given chance for thinking independently in the peers group.	10·03	*
15.	We learn many new things by doing the work with the mutual cooperation of all friends.	23·98	**

NS = Not Significant, * = Significant at 0·05 level, ** = Significant at 0 01 level.

The reactions of the students belonging to High, Average and Low concept formation groups were taken in respect of each of the statements. The chi-square test was employed for this purpose which revealed that except chi-square values of 8·44 and 8·07 rest of the chi-square values were significant at 0·05 or 0 01 levels.

There are many significant reasons for this type of relationship between interpersonal styles and the development of moral concepts among the child. One possible reason for this type of relationship is that a child's conscience is based on his identification with his parents, teachers and peers. Further, a child has inborn feelings of respect for his parents and teachers and when their interpersonal relations are good, the development of the moral concepts is also high. Another reason is that the parents and teachers offer instructions both by precepts and examples. Groves (1940) has also expressed that parental precepts and examples get in the children's conditioning long before the child is conscious and the

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parental values are continually reinforced as long as child is in the home. Freud (1927) repeatedly pointed out that moral discipline develops out of the "dread of loosing love".

Conclusion

From the above discussion, it can be concluded that the students who have better interpersonal relationship with parents, teachers and peers have a tendency to develop higher moral concepts as compared to the students who have poor interpersonal relationships with their parents, teachers and peers.

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Adjustment Problems of College Students

Dr. (Smt.) Swarn Lata Tripathy
S. C. College, Ballia

In the present study, an effort had been made to find out the adjustment problems of college students. For this purpose a check list, a questionnaire on socio-economic status and an Inventory Schedule prepared by the researcher and the Adjustment Inventory prepared by M. S. L. Saxena, the Test on General Mental Ability prepared by M. C. Joshi had been used. The analysis of data was done through Mean, S.D., C.R. and Product-Moment Correlation. By the results, it was found that the college students face mainly five adjustment problems i.e., Problem of facing uncertain future, Adjustment in Domestic life, Economic Adjustment, Adjustment to Academic Environment, Problem of Utilizing leisure time. The study was conducted at the colleges of Varanasi Division, 400 college students served as subjects.

INTRODUCTION

Adjustment is an active process through which an individual copes with his social and physical demands. It is in fact, a condition which shows harmonious relationship between the individual and his environment both social and physical. But the condition around an individual never remain static and he has to readjust himself according to the changes. The failure in adjustment results in various psychological disorders in the individual.

College students belong to late adolescent stage and they find themselves caught in the cobweb of needs—personal, social academic, vocational etc. At this stage problem of adjustment is very acute and failure in adjustment to any situation would result in the development of unbalanced personality.

The adjustment problems of every individual or the group of individual would vary and it would be better to discover adjustment problems of single individual or a group of persons The generalization regarding adjustment problems could be made if the adjustment problems of a group of persons are studied.

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Angell et. al., (1928), Frank (1951), Bhatt, et al., (1961), Kakkar (1964), Agrawal (1970), studied the Adjustment Problems of students under five areas i.e., home, health, social, emotional and college. In the present study efforts had been made to know the main problem areas of the college students. The adjustment of students in the five areas had been studied along with their individual problems as reported by them.

Aims of the Present Study

i. To study the adjustment problems of college students.

ii. To study the adjustment problems of male and female students belonging to different socio-economic, intelligence, adjustment levels and locality.

iii. To determine the degree of relationship between intelligence, adjustment and socio-economic background.

Hypotheses

i. There is no difference in average scores of the students belonging to different groups in the main adjustment area.

ii. Intelligence and socio-economic levels have no relation with the adjustment.

Methodology

The primary aim of this investigation was to find out the adjustment problems of the college students. In this context the following tests and questionnaire were used :

(*i*) *Problem Check List* : A problem check list was prepared showing 23 adjustment areas. The problems that figure in the list are—Domestic cir cumstances, Academic Environment of the college, Lack of courage in facing the realities of life, developing friendship with neighbours, inability in studying the prescribed courses and lack of positive attitude towards facing membership etc.

(*ii*) *Questionnaire on S. E. S* —A questionnaire is prepared for determining the socio-economic and cultural status of the college students. It covers three areas-social, economic and cultural.

(*iii*) *Interview Schedule* : On the basis of responses given under the check list a structured Interview schedule consisting of five parts, each covering one adjustment problem area, namely— Economic, Domestic, Academic Environment of the college, Problem of spending leisure time and obsession with meeting the future life are selected.

(*iv*) *Test on General Mental Ability* : To study the intelligence level of college students, the Test on General Mental Ability prepared by M. C. Joshi was used.

(*v*) *Adjustment Inventory :* This inventory was constructed and standardized by M. S. L. Saxena. The inventory covers five separate adjustment areas-Home, Health, Social, Emotional and School or College, Adjustment. It discriminates between well adjusted and poorly adjusted students.

Sample :

This study is confined to Varansi Division only. The population related includes all the college students belonging to the five districts, Varanasi, Ballia, Ghazipur, Mirza-

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pur, Jaunpur. Ultimately sampling was resorted to. The method of sampling was stratified cluster.

RESULTS AND DISCUSSIONS

The problem of present investigation as stated earlier is to find out the adjustment problems of college students. The analysis of data revealed following points :

(i) It was observed that (49%) boys face difficulity mainly in carrying on their studies due to lack of proper educational environment in the college, in coping with the economic problems, in developing amicable relation with their classmates, in facing realities of life.

(ii) (53%) Girls were facing problem for spending leisure time. They were facing difficulty due to lack of educational environment in the college also.

(iii) (53%) Urban students expressed difficulty in adjusting to the educational environment while rural students expressed less difficulty in adjusting to the educational environment. They also expressed that they were facing difficulty in their studies due to poor economic condition

(iv) Girls were more adjusted in home and health area (CR=7·52) while boys were more adjusted in social area (CR=5·48).

(v) Highly adjusted students secured better points in the intelligence test. Urban boys and girls secured better points in the intelligence test in comparison to rural boys and girls (CR=3·08 and 2·51).

(vi) It was observed that adjusted students had comparatively better socio-economic bockground.

(viii) Girls had comparatively secured better points on the socio-economic scale.

(vii) Intelligence, Adjustment and Socio-economic status were mutually dependent (r=·41 and ·31).

(ix) The responses of students on the Interview Schedule revealed that maladjusted students face difficulty in maintaining Domestic adjustment, facing Economic crisis, Adjustment to Educational environment and are unable to enjoy their leisure time, while highly adjusted students face less difficulty in adjusting to these situations.

(x) The hypotheses were not supported by the obtained data.

The findings mentioned above indicate that the college going boys and girls face enormous difficulty in facing the problems of spending their leisure moments and the uncertain future. Upto the college level they live in a protected and refined environment but the things happening outside their homes and institutions appear to be horrifying the tendency of escapism and withdrawal behaviour may develop in them, if no proper care and attention are given. The sympathy and understanding of their parents and teachers can help a lot in facing the problems mentaioned under this study. Personal guidance can be given to the students when they feel depressed.

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A Study of Values in Relation to SES of Rural Student's

G. S. Adhikari*

A sample of 200 Low SES, 93 Middle SES, 35 High SES boys and 9 Low SES, 30 the Middle SES, and 22 High SES girls of Northern Utter Pradesh were selected for the study of Values. The effect of Socio-economic status was seen in Theoritical, Aesthetic and Religious Values of rural boys. While the rural boys remained unaffected from SES for Economic, Social and Political Values. The girls had significant change in Social and Political Values with the change in SES. The Socio-economic status did not show any effect on Theoritical, Economic, Aesthetic and Religious Values.

Introduction

Values are 'Things in which people are interested'. Things they want and desire to be or become feel as obligatory, worship and enjoy. Values, are a type of norm and are closely related to Attitudes and Motives, because they represent orientation or toward a given goal, According to psychological orientation, personality and interest test have attempts to arrive at a system of human motives, which may be identified as values. A considerable amount of work has been done on values by Spranger (1928) who classified values in to six major categories, namely. Theoritical, Economic, Aesthetic, Social, Political and Religious Values. Allport and Vernon (1931) proposed a test to study the value in order to measure the six values. Further the test was improved by Allport, Vernon and Lindzey (1951) and Ray Chowdhary (1958) in Indian situation. The study of Hindu and Muslim women demonstrated a significant difference between the Hindu and Muslim undergtaduate women. It was observed that Muslim women showed greater interest in religious value where as the Hindu counterpart showed greater concern in social and political values.

A study on the inter-relationship of values with other variables, like-sex, educational level, creativety and intelligence were made by Tiwari and Singh (1973), Hales and Fermer (1973), Pramesh (1972) and Pandey (1977) respectively.

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Bhatnagar (1963) measured the difference in values between the two groups and the general population of the students. The major important to all the three group. Other values shift in order of important from one group to another.

Kakkar (1971) studied values of teachers trainees and college teachers showed that teachers obtained higher scores of Political Values followed by theoritical and social values. The study made by Khare (1868) on value among Advocates, Engineers, Doctors and Professors attributed highest importance to Theoritical values. All the group except professor attributed less significance to Aesthetic and Religious Values.

On reviewing the researcher on values in India, was found that studies on SES group still left. The present study is an attempt to through light in this direction. In the present context attempt has been made to find out that values pattern among the Low, Middle, and High SES students. It was aimed to asess the values difference in the same groups. The pattern of change in values were also considered for different type of rural boys and girls.

Methodology :

The study patteln of values in boys and girls belonging to High, Middle and Low SES rural boys respectively 33, 93 and 215, high, middle SES. In Kumaun district similarly 22, 36 and 90 High, Middle and Low SES rural girls were also selected at the same place. These rural groups of boys and girls belong to high school.

Procedure :

First of all the subjects were administered the Rao's Socio-Economic Status scale (1977). The students group was first classified into Low, Middle and High SES groups. After that, a revised test of Allport Vernon's study of value test in Hindi by Ojha (1971) was administered to Subjects.

RESULT AND DISSCUATION

The boys of high socio-economic status had higher ($P > \cdot 05$) theoritical value than middle and low SES. No significant difference was observed between low and middle SES boys while girls did not show any significant difference in theoritical values due to change in socio-economic status. The rural boys and girls had same economic values whatever be there SES. The Aesthetic value of rural boys was higher in low SES in comparison to high and middle SES. While no significant difference was observed in Aestetic value of the girls. The social value of the boys were found to be same in all the three groups, but it was significantly low (0·01) in low SES girls than high and middle SES girls. The political value of the boys were same in all the group of the study for boys. The girls of high SES had higher Political value ($p < \cdot 01$) than the low and middle SES girls The boys of the low SES were attaining significantly high religious value ($P < 0 \cdot 01$) than middle and high SES boys. The girls of different SES did not significantly differ from each other with regard to their religious value. (Table-1 and 2)

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Table – 1 : MEAN ± S D. of Different Values in Various SES Groups of Rural Boys.

SES Group	N	Areas of Values					
		Theoritical	Economic	Aesthetic	Social	Political	Religious
I. Low SES	215	46·06 ±7·55	42·58 ±4·90	33·20 ±6 55	47·62 ±5·85*	50 30 ±6·33	41·72 ±6·10*
II. Middle SES	93	46·51 ±5·95	41·51 ±6·00	31·45 ±7·00*	48·33 ±6·95	49·47 ±7·00	39·47 ±7·00
III. High SES	33	48·21 ±5·20*	41·69 ±4·00	31·44 ±7·00	43·81 ±6·50	50·33 ±5·80	40·48 ±7·30
P Values							
I – II		NS	NS	∠·05	NS	NS	∠·01
I—III		∠·05	NS	∠·05	NS	NS	NS
II—III		NS	NS	NS	NS	NS	NS

NS=Not significant, *=Sign for comparison of values between the boys and girls of same group, N=Sample size, P∠0·05, ∠0 01.

Table – 2 : MEAN±SD of Different Values in Various SES group of Rural Girls.

SES group	N	Areas of Values					
		Theoritical	Economic	Aesthetic	Socila	Political	Religious
I. Low SES	9	42·48 ±5·80	40·88 ±5·65	34·22 ±6·70	41·44 ±5·80	47·00 ±8·45	38·66 ±6·40
II. Middle SES	36	46·16 ±5·95	41·30 ±6·50	33·94 ±5·85	48·25 ±6·55	49·91 ±6·15	41·16 ±8·25
III. High SES	22	46·09 ±5·25	44·27 ±6·30	34·72 ±6·30	50·18 ±4·65	52·46 ±3·30	41·09 ±6·90
P Values							
I – II		NS	NS	NS	∠·01	NS	NS
I—III		NS	NS	NS	∠·01	NS	NS
I – III		NS	NS	NS	NS	∠·01	NS

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Bride Selection Criteria : A Study With Reference To Eastern Orissa

G. C. Biswal
C. A. S. E., M. S. University, Baroda

Family is regarded as the basic unit of the social structure in every society. The specific pattern of family relationship in any given society is the product of the mores and it varies with time, place and person. Religious, social, political and economic factors also influence the family relationship. Changes in the pattern of family relationship, especially the husband and wife relationship can be ascribed to the changes in marriage systems (the way the marriage functionaries take place.)

Marriage involves the close co-operation of two persons of opposite sex. The success in marital life depends to a great extent in the criteria through which the members of opposite sex are selected for each other.

While it is true that most men marry girls who have had less formal education than they, the more educated a man is, the greater is his tendency to select a wife of above average education. Similarly, the more educated girl is likely to marry a man of superior education. In these days of social mobility and contact in schools, jobs, military service and social life, it is inevitable that men and women of different religious faiths will meet and become attracted to each other. Most people prefer to marry someone of approximately the same age with the female partner a little younger than the male. Marital life depends on no single factor : it results from the interaction of the total personalities of the parents and resources. Marriages are likely to succeed when the husband and wife are of similar social status and when the couple tends to move upward rather than downward on the social scale.

Adequate income, savings, low indebtedness and steady employment are also positively related to marital success. Success in marriage also depends on personality factors. Most individuals tend to select partners whose needs or personalities complement their own e. g. a person who needs to dominate others will be attracted to a partner with a strong tendency to depend upon someone else and *vice versa*.

Peace and happiness of marital life rest on the philosophy of life of both the partners. They must not have contrasting attitude to any person, object and social phenomenon. Saint Exupery may be remembered here for he stands by the proposition "Life has taught us that love does not consist in gazing at each other but in looking outward together in the same direction".

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The success of marital life very often found to be dependent upon the liberal treatment of the society that provides liberty and opportunity to young adolescents to find out their life partners according to their interest and inclinations.

Goode believes that in most Societies the parents attempt to control and channel the direction of adolescent affection in order to preserve social stratification and lineage patterns (institutional pattern). Our traditional society in Orissa very well conforms to the institutional pattern as said by Goode and thus controls the breedle of the adolescents in checking them from picking out their life mates as per their inclinations. Thus, the happiness of one's marital life is determined by the process the better half is choosen by his parents and relatives in the society.

Thus, to explore the strategies, if any, involved in such mysterious bride selection process, the investigator under took the study under consideration. As the investigator belongs to Eastern Orissa, the study of the bride selection cirteria especially with reference to Eastern Orissa people was undertaken as a result of his increasing interest in the locality.

Hence, the investigator by consulting the research specialists and educationists has made the criteria of nine points such as :

1. *Employment* : Refers to those girls who are making money by getting appointment in service.
2. *General Behaviour* : It includes character, general social adaptability and behaviour pattern of the girl going to play the role of a bride.
3. *Socio-Economic Status* : Means economic background and social influence of the parents of girls from which the groom is going to get benefit.
4. *Caste & Creed* : Means the traditional class distribution in the society such as Brahmins, Kshyatriyas, Vaishyas & Sudras etc. to which the bride belongs by birth.
5. *Beauty* Implies overall look, appearance, size, shape, structure and style of the bride.
6. *Educational Qualifications* Refers to the academic status or the qualification of the bride in relation to her academic and vocational at tainment.
7. *Dowry* : Is regarded as the powerful incentive or gift that are realized by the bride groom from his father in law's house.
8. *Single Daughter* : Refers to the case of only one girl having brother or no brother in the family.
9. *Age* : Connotes the cronological age of the girls at the time of her marriage.

Procedure of the Study

Nine important characteristics relating to girls were taken under consideration. These nine criteria or characteristics were combined in all possible pairs. The greatest number of possible pairs for such nine characteristics came to be n (n– 1)/2 or 9 (9—1)/2=36pairs. Every character was made to appear equally on the right and on the left, to eliminate the space error. The questionnaire was prepared keeping in view the areas like, (1) Employment (2) General Behaviour, (3) S.E.S., (4) Caste and Creed, (5) Beauty, (6) Educational Qualification, (7) Dowry, (8) Single Daughter and (9) Age.

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Method of pair comparison, one of the widely used psycho physical technique was made to use of for known the most preferred and the least preferred criteria for bride selection.

Sample :

The sample of this study constitutes 80 selected influential persons in the rural society especially the H. School and M. E. School teachers. Those views regarding any social problems and issue are often respected

The purposive sampling teachnique was used for the selection of the sample.

Collection of Data :

Each individual member of the sample was supplied with one copy of questionnaire and was requested to give their actual response independently over the questionnaire.

After the collection of the data, it was found that only 60 out of 80, data were completed in all respect. Hence, analysis was made on those completed questionnaire by the method of pair comparison. The details of the computation of the data are given as follows :

Table-A : Response Matrix for the Nine Characteristics Judged in Terms of Bride Selection Criteria

1	2	3	4	5	6	7	8	9
0	50	30	20	30	40	2	14	31
10	0	12	10	15	20	3	10	20
30	48	0	25	35	45	5	6	36
40	50	35	0	40	40	10	15	40
30	45	25	20	0	38	5	10	25
20	40	15	20	22	0	2	6	30
58	57	55	50	55	58	0	55	54
46	50	54	45	50	54	5	0	45
29	40	24	20	35	30	6	15	0

1. Employment
2. General Behaviour
3. S. E. S.
4. Caste
5. Beauty
6. Educational Qualification
7. Dowry
8. Single Daughter
9. Age

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Table-B : Proportion Matrix for nine characteristics judged in terms of bride selection criteria.

	1	2	3	4	5	6	7	8	9
1.	·00	·83	·50	·33	·50	·67	·03	·23	·52
2.	·17	·00	·20	.17	·25	·33	·05	·17	·33
3.	·50	·80	·00	·42	·58	·75	·08	·10	·60
4.	·67	·83	·58	·00	·67	·17	·17	·25	·67
5.	·50	·75	·42	·33	·99	·09	·08	·07	·42
6.	·33	·67	·25	·33	·37	·00	·03	·10	·50
7.	·97	·95	·92	·83	·92	·97	·00	·92	·90
8.	·77	·83	·90	·75	·83	·90	·08	·00	·75
9.	·48	·67	·40	·33	·58	·50	·10	·25	·00

Table—C : Z—Matrix for nine characteristics judged in terms of bride selection criteria.

	1	2	3	4	5	6	7	8	9
1.	·00	1·41	·95	1·41	1·88	1·28	1·41	1·88	1 64
2.	—1·41	·00	·67	1·28	·74	·67	·95	1·28	·95
3.	—·95	—·67	·00	·20	·44	·44	·44	·44	9 5
4.	—1—41	—1·28	—·20	·00	·00	·25	·20	·67	·84
5.	—1·88	—·74	—·44	·00	·00	·05	·00	·44	·95
6.	—1·28	—·67	—·44	—·25	—·05	·00	·20	·00	·44
7.	—1·41	—·95	—·44	—·20	—·00	—·20	·00	·33	·67
8.	—1·88	—1·28	—·44	—·67	—·44	·44	·00	—·00	·44
9.	—1·64	—·95	—·95	—·84	—·95	—·44	—·67	—·44	·00

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E. Z.	−11·86	−5·13	−1·29	0·93	1·62	2·05	2·20	4·60	6·88
Mean	−1·318	−·570	−·143	1·03	·18	·228	·244	·511	·764
	−1·318	−1·318	−1·318	−1·318	−1·318	−1·318	−1·318	−1·318	−1·318

0	·748	1·175	1·421	1·498	1·546	1·562	1·829	2·082

Dowry	Single Daughter	Caste S. E. S.	Employ-ment	Age	Beauty	Educaitonal Qualification	Gen. Behaviour

Conclusion :

After analysing the data, the investigator came to the conclusion that the people in Eastern Orissa prefer to select brides on the basis of their general behaviour. (General behaviour being the most preferred criteria as per the findings of this study). The people of the said region do not put much stress on dowry, (Found to be the least preferred criteria in this study) for selecting the brides for marriage purposes.

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Oocupational stress, Ego-strength and Job Satisfaction as influencing factors of the Job-involvement of First-level Industrial Supervisor

P. C. Mishra[1] & A. P. Singh[2]

The purpose of the present investigation is to find out the influence of occupational stress, ego-strength and job satisfaction on job involvement of first level industrial supervisors. The Occupational Stress Index has been used to assess the stress of supervisors. It includes twelve subscales namely Role overload, Role ambiguity, Role conflict, unreasonable group/political pressure, under participation, poor-peer relations at work powerlessness, low status, intrinsic impoverishment, strenuous working conditions and unprofitability. Ego-strength has been measured by Hasan's E S. Scale. The satisfaction has been measured by S. D. Employees Inventory. It includes four subscales namely, Job Management, Social relation and Personal adjustment. The study has been conducted at Diesel Locomotive Works, Varanasi. The sample consists 400 first level industrial supervisors. The results are analysed in terms of mean, standard deviation, critical ratio, anaysis of variance and correlation. A significant difference in job involvement was also observed between high job satisfaction/low job satisfaction group. A significant positive correlations between job involvement, job satisfaction and ego-strength, job satisfaction has been found.

INTRODUCTION

Research efforts concerning the job involvement have been clearly on the rise lately. There are strong indications that the concept may assist in unraveling some issues in the

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area of work motivation (Gachman & Winer, 1975), Lawler and Hall, 1970, Lodahl and Kejner, 1965).

It is considerd that job involvement is a necessary condition, if an individual is to accept fully the organization demand placed upon him by his membership in an organization (Katz and Kahn, 1966). Faunce (1959) stated the degree of occupational involvement as referring to the extent to which success and failure in occupational role affects self-esteem. Similarly, Gurin et. al. (1960) viewed job involvement in terms of the degree to which performance affects self-esteem. French and Kahn (1962) stated that if job performance is central to the worker, than we have "ego-involved performance.

It was Lodahl and Kejner (1964) who pointed out that job involvement is the degree to which a person is identified psychologically with his work or importance of work in his total self-image.

There are several conditions which strengthen job involvement of the supervisor. According to Bass (1965) they are opportunity, to make decisions, the feeling that one is making an important contribution to company success; self-determination, recognition, and freedom to set one's own work pace. Personal Background values and job characteristics also influence job involvement (Rub, 1975), Mehta (1977) considered job involvement as intervening condition. According to him factors such as autonomy, friendly relations, supervisory behaviour trust and support lead to involvement which in turn increases productivity.

In India, the area of job involvement has been least explored. Recently the Indian Psychologists have tried to relate the job involvement with demographic situational and personal variables. Researchers in India attempted to determine the relationship of job involvement with demographic, perceived importance of job factor, different occupational groups, anxiety, role stress variable like role conflict and role ambiguity, company satisfaction or employee needs. Relationship between personality variables and job involvement may be expected to vary depending upon the nature of the job and work atmosphere.

However, it has been generated that the employee's job involvement is influenced by the total job environment as well as personality variables. Hence the aim of the present investigation is to determine the relationship of the occupational stress, ego-strength and job satisfaction with the job involvement or first level industrial supervisors.

Hypotheses

The following three specific hypotheses were formulated in the present investigation.

1. There is significant difference between the mean job involvement scores of high and low occupational stress groups.

2. There is significant difference between the mean job involvement scores of high and low Ego-strength groups.

3. There is significant difference between the mean job involvement scores of high and low job satisfaction groups.

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Methodology

An attempt has been made to examine the relationships of occupational stress, ego-strength and job satisfaction with job involvement of first-level industrial supervisors. The job involvement has been treated as dependent variable, while occupational stress, ego-strength and job satisfaction are treated as independent variables Two groups are identified, i.e., high and low on the basis of median scores obtained on each independent variables. Thus, a $2\times2\times2$ factorial design has been used for the purpose of analysis.

Measures

To study the variables in the present investigation, the following four psychometric devices were utilized

1. Occupational Strees Index. The occupational stress has been assessed with the help of Occupational Stress Index, developed and standardized by Srivastava and Singh (1981). The Occupational Stress Index consists of 46 statement with five response alternatives namely *strongly agree, agree, uncertain, disagree, strongly disagree.* This index assesses employees perceived stress arising from the twelve dimensions of job life. The dimensions are Role Overload, Role ambiguity, Role conflict, Unreasonable group/political pressure, Under-participation, Responsibility for the persons, Powerlessness, Power-peer relations at work, Intrinsic impoverishment, Low status, Strenuous working conditions and Unprofitability.

Index of homogeneity and internal validity of individual items and been determined by completing point biserial coefficient of correlation (rpb). The values of rpb is ranged from ·36 to ·59. The internal consistancy of the test determined by computing Odd-Even method was found to be ·935 (corrected by S-B formula). The index of reliability was also ascertained by computing Cronbach's alpha coefficient which was found to be (r=·90).

2. *Hasan's Ego-strength Scale or E. S. Scale* : The Hindi adaptation of Barron's Ego-Strength Scale which was prepared by Hasan (1970) has been used to assess the ego-strength of supervisors. The scale contains 32 items all of which are in the form of interrogative statements. Each item would be responded either in terms of 'Right' or 'Wrong'. The odd-even reliability coefficient for the scale by Spearman-Brown prophacy test has been found as ·78. The test-retest reliability coefficient of 2 and 5 weeks between subsequent administration. The scale was also found to be significantly correlated with such meaningful personality characteristics as neuroticism external-internal control; and security-insecurity.

3. S. D. Employee's Inventory. Employee's Inventory has been administered to assess the job satisfaction of the first level supervisors (Pestonjee, 1973). It includes four areas namely, Job Management, Social Relations, and Personal Adjustment. All the 80 items of the inventory are framed in the form of interrogative statements which could be responded in terms of 'Yes' or 'No'. The areawise split half reliability coefficients are found to be ·99 for job, ·99 for Management, ·98 for Social relations and ·98 for Personal Adjustment.

4. Job Involvement Scale. The Job involvement Scale developed by Kapoor and

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Singh (1978) has been used to find out the levels of employees job involvement. The scale comprises of 20 items with four response alternatives for each items, namely, *strongly agree, agree, disagree,* and *strongly disagree.* The alpha coefficient technique was applied to find out the reliability of the scale which was found to be ·82. The Index of homogeneity and internal validity of the scale were tested by computing the point bisearial correlation (rpbi) product moment correlations were run among the items and the matrix thus obtained has been factorized using the Principal Component Method. The factors have been rotated by 'Varimax Technique'.

Sample

The study was conducted on 400 first-level industrial supervisors, working in the Diesel Locomotive Works, Varanasi (U. P.) located in North India. The subjects are selected from different sections of the organization, namely Engine Erecting Shop; Electrical Repair Shop, and Light Machine Shop. Categorywise and shopwise total number of cases are as under :

Category	Engine Erecting shop (n)	Electrical Repair shop (n)	Light Machine shop (n)
1. Sub-superintendent	15	13	12
2. Asst. Shop Supdt.	42	35	28
3. Chargeman 'A'	50	50	45
4. Chargeman 'B'	52	36	42
Total	139	134	127

Results

Table—1 : Mean, S. D. and C. R. of Job involvement scores of high/low occupational stress group, High/Low ego-strength group and High/Low job satisfaction groups.

	High group			Low group			
	N	Mean	S. D.	N	Mean	S. D.	C. R.
Occupational Stress	191	56·92	6·16	209	56 94	6·77	0·032**
Ego-strength	185	56·74	6·73	215	57·10	6 28	0 544**
Job Satisfaction	200	57·70	6·54	200	56·17	6·36	2·38*

*Significant at ·05 level **Not significant at any level.

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To find out the main and interaction effects of three independent variables i e., occupational stress, ego-strength and job-satisfaction on the job involvement, the analysis of variance (F-ratio) was applied. Results are recorded in Table 2.

Table – 2 Analysis of Variance

Source of variation	Sum of square	df	Mean Square	F-ratio
A. Occupational stress	0 392	1	0 391	0·3619**
B. Ego-strength	1·233	1	1·233	1·1385**
C. Job satisfaction	8·529	1	8 529	7·8753*
A x B O. S. x E. S.	0 049	1	0 049	0 0452**
A x C O. S. x J. S.	0·297	1	0 297	0·2742**
B x C E. S. x J. S.	0 885	1	0 885	0 8171**
A x B x C O. S. x E. S. x J. S.	0·227	1	0·227	0·21006**
Error : Within treatment		392		

* Significant at 01 level **Not significant at any level.

The intercorrelation of the occupational stress, ego-strength job satisfaction and job involvement for the total group of supervisors have been computed and are recorded in Table 3.

Table – 3 : Correlation between job involvement and occupational stress. Job involvement between ego-strength, Job involvement between job satisfaction and between occupational and Ego-strength and Job satisfaction and between Ego-strength and job satisfaction. N=400

	Variables	Coefficient of correlations
1.	Job involvement Vs Occupational stress	– 0503
2.	Job involvement Vs Ego-strength	+·0267
3.	Job involvement Vs Job satisfaction	+·142*
4.	Occupational stress Vs Ego-strength	+ 32*
5.	Occupational stress Vs Job satisfaction	– 55*
6.	Ego-strength Vs Job satisfaction	+ ·44*

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Discussion and Interpretation

From earlier researches the job involvement and its correlates it is evident that those do not provide sufficient and consistent information regarding the job involvement and also its relationship to other relevant variables.

The sample has been classified into high and low occupational stress groups on the basis of the median.

From Table 1 we find that the low occupational stress (LOS) group has higher job involvement score than high occupational stress (HOS) group. Critical ratio is not found to be significant. But it suggests that supervisors of low occupational stress group are more job involved in comparison to the high occupational stress group.

Further F-ratio has also been computed to obtain a better description into the effect of occupational stress on job involvement. The obtained value of F-ration is not statistically significant (Table 2). It means that the occupational stress does not significantly affect the job involvement.

An observation of Table 1 reveal that high ego-strength group has lower job-involvement score in comparison to high ego-strength group. Critical ratio is computed to ascertain the significance of difference between the two means and it indicates non-significant difference. It proves that the two groups do not differ significantly in terms of their job involvement level.

F-ratio has also been computed for better description into the effect of ego-strength on the job involvement. The obtained value of F-ratio is not statistically significant (Table 2). It means that the ego strength does not significantly affect the job involvement of first level industrial supervisors. From the results presented in Table 1 we observe that high job satisfaction (HJS) group has higher job involvement scores as compared to low job satisfaction (LJS) group. The critical ratio has been computed to find out the significance of difference between the mean job involvement scores of these two groups. It is significant beyond ·05 level. It leads to the idea that supervisors of HJS group have significantly higher job involvement scores as compared to supervisors of LJS group.

Further F-ratio has also been computed to find out a better insight into the influence of different categories of job satisfaction (viz, high and low) on job involvement of supervisors. The obtained F-ratio is significant beyond ·01 level (Table 2). This confirms the idea that HJS and LJS group both differ significantly in terms of job involvement scores.

The coefficient of correlation between occupational stress and job involvement is negative but not significant. (Table 3). This indicates that when the level of occupational stress increase job involvement also decreases and vice-versa.

It is noteworthy that sufficient efforts have been made to explore the relationship between role stress and job satisfaction but there are very few studies which examined the relationship between job involvement and stress. Hamner and Tosi (1974) observed inverse relationship between role stress and job involvement. Thus the first hypothesis is rejected.

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The coefficient of correlation between job involvement and ego-strength is positive but not significant (Table 3) This indicates that when the level of ego-strength increases job involvement also increases and vice-versa.

In our study the respondents are first level industrial supervisors who have a great role in the organizational settings. Actually they are the persons who are responsible for maintaining the optimal level of productions. Organizational goals are assigned to them and it is upto them for getting the work done upto a certain level. Here they are found to be involved in the organizational set up not because of their personal liking but the nature of work makes it obligatory on their part to be involved in the work, 'Thus it is the reason for non-significant difference between the two groups. Thus the results rejects the second hypothesis.

The coefficient of correlation between job satisfaction and job involvement scores show a highly significant and positive relationship (Table 3). It indicates that the high level of job satisfaction is associated with high level of job involvement and vice-versa. The conducted studies in this area have generally demonstrated the positive relationship between two variables. Wissenberg and Gricafeld (1968) found that involvement increases with increasing satisfaction of motivator variables.

Schwyhart and Smith (1972), Rao (1976), Sharma & Sharma (1978) and Porat (1979) also observed the positive correlation between job satisfaction and job involvement. The result of the present part of the study are quite consonance with the findings of earlier investigations, (Hall, Schneider and Nygren (1970), Ravi Kumar and Harigopal, 1980, Reddy & Ravi Kumar, 1980). Thus the third hypothesis is confirmed.

The interaction between occupational stress Egostrength is not significant. It indicates that the difference between job involvement scores of high occupational stress and low occupational stress for the first level of ego-strength (high) is not significantly different from the difference between the job involement score of high occupational stress for the second level of ego-strength (low). On the basis, of this non-significant interaction we can say that the occupational stress effects or difference between high and low occupational stress is independent of ego-strength, that is, we have approximately the same difference between high occupational stress and low occupational stress, regardless of the levels of ego-strength.

The interactional effects of occupational stress × job satisfaction, ego-strength × job satisfaction and occupational stregth × ego-strength × job satisfaction are not found to be significant.

Now we discuss the inter-correlations among the occupational stress, ego-strength and job satisfaction for the total group of supervisors (N=400) which has been recorded in Table 3.

The inter-correlation between ego-strength and occupational stress is negative and significant. This confirms the view that supervisors of high ego strength feel themselves less occupational stress and vice-versa.

The relationship between ego-strength and job satisfaction is significatly positive. Supervisors with high ego-strength feel higher sense of satisfaction. Thus, when ego strength increases the job satisfaction also increases and vice-versa.

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Rizzo. House and Lirtzman (1970), House and Rizzo (1972) Keller (1975), Srivastava and Parmar (1979) found a negative relationship between role stress and satisfaction.

The following conclusions may be drawn from the present investigation.

1. Job involvement and occupational stress have no significant negative relationship
2. Job involvement and ego-strength have negative associationship.
3. Job involvement and job satisfaction have positive significant relationship.
4. However, occupational stress and ego-strength have negative arsociation with each other. Supervisors with high ego-strength find stress in the job and vice-versa.

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Personality Factors And Job Satisfaction Among Supervisors

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The purpose of the present investigation was to see whether personality factors namely-neuroticism and authoritarianism had any significant bearing on job satifactor or otherwise. Brayfield and Rothe's Job Satisfaction Index, Adorne's F-Scale and MPI were administered to 500 supervisors. Ss were classified in four different groups on the basis of their scores on neuroticism and authoritarianism. These groups were $H_{Ne} - H_{Au}$ *(*$S_s = 30$*),* $L_{Ne} - L_{Au}$ *(*$S_s = 24$*),* $L_{Ne} - H_{Au}$ *(*$S_s = 16$*) and* $H_{Ne} - L_{Au}$ *(*$S_s = 12$*). The groups were correlated to test whether they are closely related or independent to each other. Results as predicted revealed significant difference between the job satisfaction scores obtained by the extreme groups.*

Introduction :

There is a general agreement that job satisfaction involves the attitudes of workers toward their work and work environment. It can be more accurately interpreted in terms of the general emotional tone of employees. Lock (1969) defined job satisfaction as the pleasurable emotional state resulting from the apprasial of one's job as achieving or facilitating the achievement of one's job values. Pestonjee (1973) noted that job satisfaction can be taken as a summation of employee's feelings in four important areas. Two of these (job and management) encompass factors directly concerned with the job and the remaining two (social relations and personal adjustment) include factors not directly connected with the job but which are presumed to have a bearing on job satisfaction.

Emotional disturbances, major as well as minor, occur if the individual is not sufficiently mature and stable to withstand the stresses of his environment. The major problem in industry is posed by neurotic disturbances of various types. Neurotic reactions are the commonest form of faulty response to stresses of life. It represents a behaviour problem in which the person responds to life's demands with undue anxiety. Much neurotic reac-

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tions are the result of frustration and conflicts. It is possible that repressed desires, which are usually associated with neurosis and adjustment, make the worker dissatisfied with his job. On the other hand, it is also possible that a dissatisfied worker develops symptoms suggesting neurosis. Neuroticism seems to have significant influence on job satisfaction and performance. Guha (1965), and Mehdi and Sinha (1971) found negative correlation between job-satisfaction and neuroticism.

Some observers have viewed the authoritarians as neurotic and maladjusted individuals. Authoritarianism was conceptualized as indicative of individuals who would rigidly adhere to coventional values, and advocate punishment for violators. Furthermore, they would be likly to exhibit negative view of mankind, oppose any reliance on subjective feelings and readily accept supernatural determinants of behaviour. They are preoccudied with power relationships and exhibits a power and toughness orientation. They are thought to be individuals with strict super egos controlling a weak ego and are more conforming and less hostile to high status sources. It has been found that workers who were highly satisfied tended to have low authoritarianism and vice-versa. According to Levy (1976), low-authoritarian subjects were judged to be significantly better, adjusted than high authoritarians. Thus, the notion that authoritarians are maladjusted leads to a prediction of a relationship between the authoritarian scale (F-scale) and neuroticism.

The present investigation therefore, intends to test the hypothesis that the Subjects having high neurotic and authoritarian qualities would be less satisfied with their jobs than the subjects having low neurotic and authoritarian qualities.

Method :

Subjects : This study is inainly confined to the supervisors of Bhilai Steel Plant. The 500 supervisors were administered Neuroticism scale and F-scale. On the basis of their scores on these two measures they were classified into four different groups. The S_s scoring high (above 75th percentile. Q_3) on both neuroticism and authoritarian scale constituted the High neurotic-High authoritarian ($H_{Ne} - H_{Au}$, $S_s = 30$) group. The S_s scoring low (below 25th percentile Q_1) on both the measures constituted the low neuroticism-low authoritarian ($L_{Ne} - L_{Au}$, $S_s = 24$) group. The third group consists of 16 S_s who scored low on neuroticism but high on authoritarianism ($L_{Ne} - H_{Au}$). Finally the fourth group consisted of 12 S_s, scoring high on neuroticism and low on authoritarianism ($H_{Ne} - L_{Au}$). These groups were compared on the basis of their job satisfaction scores.

Test Used :

(1) Brayfield and Rothe's Job-Satisfaction Index (Adapted in Hindi by the present investigator) to measure over-all job satisfaction of the supervisors.

(2) Maudsley Personality Inventory (Adapted by Jalota and Kapoor) to assess level of neuroticism in the supervisors.

(3) Adorno's Authoritarianism Scale (F-scale, adapted by the present investigator) to assess level of authoritarianism in the supervisors.

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Procedure :

The scales were administered both individually as well as in small group-settings, depending upon the availability of the supervisors.

Results and Discussion :

With a view to obtain evidence about the hypothesis stated earliar, mean job satisfaction scores and SDs of all extreme groups, were obtained. To check whether these extreme groups are closely related or relatively independent to each other, product-moment correlations were also obtained. Table-I, presents the mean job satisfaction scores, SDS, as well as correlations between the extreme groups.

Table I : Mean Job-Satisfaction scores. SDs and 'r' values of extreme group.

Groups	N	Mean	SD	df	'r'
$H_{Ne} - H_{Au}$	30	36·43	6·25	28	0·45
$L_{Ne} - L_{Au}$	24	59·25	7·56	22	0·44
$L_{Ne} - H_{Au}$	16	56·38	6·49	14	0·20
$H_{Ne} - L_{Au}$	12	48·92	9·46	10	0·11

A glance at Table-I, reveals that mean job satisfaction scores of $H_{Ne} - H_{Au}$ (M=39·43) is less than the mean job satisfaction scores of $L_{Ne} - L_{Au}$ (M=59·25). This indicates that supervisors who have high neuroticism and authoritarianism qualities are less satisfied with their jobs as compared to supervisors who scored low on these measures. Further, Mean job satisfaction scores of $L_{Ne} - H_{Au}$ (M=56·38) is also greater than the mean job satisfaction scores of $H_{Ne} - L_{Au}$ (M=48·92), that is, the S_s scoring low on neuroticism scale but high on authoritarianism scale are more satisfied than those who scored high on neuroticism but low on authoritarianism. This indicates that neuroticism contributes more to job dissatisfaction. Persons having high neurotic qualities are more dissatisfied with their jobs.

It is obvious, from the Table-I that the positive correlations are found between $H_{Ne} - H_{Au}$ (r=0·45) and between $L_{Ne} - L_{Au}$ (r=0·40) groups. It indicates a positive relationship between the two groups, that is, S_s who scored high on neuroticism scale. Similarly, S_s who scored low on neuroticism scale also scored low on authoritarian scale. In other words, supervisors who have high neurotic qualities tended to have high authoritarian qualities also, while S_s having low level of neuroticism tended to have low level of authoritarianism.

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To see the significance of difference between the job satisfaction scores of all these groups 't'-test was applied. Table-II presents the obtained 't'-values.

Table-II : t – Matrix

	$H_{Ne} - H_{Au}$	$L_{Ne} - L_{Au}$	$L_{Ne} - H_{Au}$	$H_{Ne} - L_{Au}$
$H_{Ne} - H_{Au}$	—	12·10*	10·08*	4·98*
$L_{Ne} - L_{Au}$		—	1·24***	3·58*
$L_{Ne} - H_{Au}$			—	2·48**
$H_{Ne} - L_{Au}$				—

Inference : *P∠·01, **P∠·05, ***NS

A perusal of the Table. II makes it clear that all camparisons except between $L_{Ne} - L_{Au}$ Vs. $L_{Ne} - H_{Au}$ (t=1·24), are significant. The 't'-value between $H_{Ne} - H_{Au}$ Vs. $L_{Ne} - L_{Au}$ (t=12·10) is significant beyond 0·01 level of confidence, indicating thereby a significant difference between the groups. That is, $L_{Ne} - L_{Au}$ group is significantly more satisfied than the $H_{Ne} - H_{Au}$ group. The signification 't'-value between $H_{Ne} - H_{Au}$ Vs. $L_{Ne} - H_{Au}$ (t=10·08), indicates that supervisors scoring low on neuroticism and high on authoritarian scale are, significantly more satisfied than the supervisors who scored high on both the measures. Similarly, the significant 't'-value between $H_{Ne} - H_{Au}$ Vs. $H_{Ne} - L_{Au}$ (t=4 98) reveals that supervisors who scored low on F-scale and high on neuroticism scale are significantly more satisfied than the supervisors who scored high on both scales. Further, the significant 't'-value between $L_{Ne} - L_{Au}$ Vs $H_{Ne} - L_{Au}$ (t=3·58) reveals that S_s scoring low on neuroticism and authorianism. Finally, the 't' value between $L_{Ne} - H_{Au}$ Vs. $H_{Ne} - L_{Au}$ (t=2·48 ∠·05) is also significant. This clearly indicates that S_s having low neurotic characteristics but highly authoritarian in nature are significantly more satisfied than those S_s who are more neurotic but low authoritarians. There is no significant difference between the job satisfaction scores of $L_{Ne} - L_{Au}$ Vs. $L_{Ne} - H_{Au}$.

Thus, the results as presented strongly confirmed the hypothesis, that there is a significant difference between high and low neurotic and authoritarian supervisors in respect to job satisfaction scores. This clearly reveals that neuroticism and authoritarianism has significant bearing on job-satisfaction.

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By

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Behavioural Antecedents of Pedestrian Accidents in India

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Post-hock analysis of 4631 cases of pedestrian accidents were made to illustrate the nature and antecedents of pedestrian accidents in India. The results indicated that darting, carelessly crossing the road, walking while intoxicated, playing on the road, walking on the carriage way and the decision conflict were the most frequent behaviours of the pedestrians preceding road accidents. Driver's faults, viz, over speeding, overtaking and drunken driving accounted for 84% of their total faults in pedestrian accidents.

Introduction :

Pedestrians are the largest single class worst sufferer road users in most part of the world. They are the persons on foot or pushing a vehicle or working on a roadway who most often become victim of road casualties. The high concentration of pedestrains in urban areas coupled with heavy vehicular traffic has posed constant threat to former's life. In rural areas, although, there are comparatively fewer such incidences but their severities are greater than their urban counterpart. Data presented by National Safety Council (Accident Facts, 1976 eds.) indicate that pedestrain fatalities have increased in U. S. A, from about 7,800 in 1960 to approximately 10500 in 1973 (about 35%) and there are on average about 1,20,000, pedestrain accidents each year in U. S. A. Similarly, figures released by Ministry of Shipping and Transportation, Govt. of India, show that pedestrain causualties increase from 18,749 in 1961 to 28,925 in 1972 (about 54%) and there are on average about 22,979 pedestrain casuallties every year. The accident figure further revealed that there are about 18 pedestrian casualties per 1003 motor vehicles in India which shows the highest proportion of pedestrian casualties to motor vehicl· registration in the world.

Although the severity of the problem has been felt by different sections of the sriciety but no tangible solution has been Provided to deal with the devastating effects for pedestrian accidents. This problem is dealt with mostly by engineers and enforcement authorities but their tunnel visions, too, seem to be inappropriate. Engineers, for example, appear to be biased in their approches to the desingn of vehicles and road schemes, and

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pedestrian's problems are given a secondary importance to the convenience of automobiles. The enforcement authorities spend their energies in maintaining the flow of traffic rather than developing operant safety habits among the road users. The remaining section of society feels themselves unconcerned of the problem

As there has been no definite national program to educate people about a road safety, partly, because of the negligence of planners and partly because of the lack of exact information about the nature of pedestrian accidents here, the present study was conduct d to highlight the trends and behavioural autecedents of pedestrian accients, so that an educational program could be framed for the pedestrians.

METHOD

Sample: Only 4631 cases of pedestrian accidents that has occured during 1978 to 1981 in different states of India, were analysed. Only those cases had been included into the sample whose investigations were complete in the records of respective police stations. An accident Investigation Sch'edule was used to collect detail information about the accident.

RESULTS AND DISCUSSION

An analysis of national accident figures revealed that Pedestrian casualties have increased about 54% during the 11 years since 1961 and at an average about 6 persons become victim of each road accident.

The figure of National Accident, reveals that there is a positive association between the number of motor vehicle registration and the pedestrian casualty. This is because of the fact that transportation serves the economic needs, political facilitation and administrative control of the Society, and thus million and million people are transported to urban areas daily having sufficient values of life in their minds but with least considerations of traffic system in their actions.

Pedestrians, in general, when enter into the traffic system are motivated by his or her desire for time and distance economy. Hence their behaviours are not affected by major considerations of road traffic enviorments, and consequently they met with accidents. The depictes the unworthy road using behaviours of the pedestrians that most often precede the traffic accidents.

Table –1 : The Pedestsrians Behaviour Preceding Accidents.

Behaviour	% of Persons Killed	Injured
1. Suddenly appearing on the road darting.	40·63	48·27
2. Carelessly crossing the road.	15 40	17 31
3. Walking under the influence of drug or alcohal.	8·11	1·20
4. Playing on the road	2·12	2·34

Contd.....

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5.	Walking at the side of the road when there are pavements.	5 50	6 02
6.	Confused when crossing.	3 52	5 20
7.	Crossing infront of oncoming vehicle.	2 80	3·47
8.	Sleepping on pavement with feet projecting on road.	2 04	4·36
9.	Sitting on pavement with feet resting on road.	2·00	2·22
10.	Slipping on road.	1·85	2·48
11.	Standing on the carriage way.	·90	3 25
12.	Sitting on road.	·21	1·10
10.	Not Known.	9·92	2·78
		100·00	100 00

It is evident from Table-1 that darting, carelessly crossing the road, walking under the influenee of drug or alcohal. and playing on the road are the most unsafe behaviours of the pedestrians responsible for their involvement into traffic accidents.

It was also found that some unsafe habits of the drivers are responsible for a large number of accidents in general and that involving pedes rians in particular.

It is also obvious that ov.rspee ding, inattentivness, drunken driving and overtaking tendencies of the drivers contribute about 70% of the pedestrian accidents, and these driving habits accounts for about 84% of their total faults in pedestrian accidents.

SUMMARY AND CONCLUSION

Pedestrian accident is not only the consequence of technical or material faiture, rather some specific unsafe behaviours of the pedestrians and drivers are responsible for a large number of pedestrian accidents.

But unfortunately the consideration of human factors has always been minimised in transportation planning. Planners and designers do not pay proper attention to the fact that traffic, too. is a social system where road users behaviours are guided by time-distance economy on the one hand and comfort as well as well as safety on the other. The personality patterns, habit and personal values; all infiuence individual's decision to use the road in a particular way. Thus, it is important to import scientific safety education and to exert operant enforcement for the solution of the problem. For all other approches of accident reduction will lag behind their targets so long as human elements are ignored or minimised in transpotation planning.

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The Effect of Age and Sex on Immediate Memory Span

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This experimental study was carried out on Boys and Girls in Orai Town. Two groups —30 Boys & 30 Girls ranging in three age groups (8 to 10, 13 to 15 and 18 to 20) were selected. Visual memory span of the subject were determined individually by means of a tachistocope. Nonsense syllabus & digits were presented visually to each subject. The expossure period was fixed at 1/10 second. 't'-test was applied to analysis the data. Results indicate that the memory span does increase with age but sex does not play an important role to increase the immediate memory span.

INTRODUCTION

Memory is a learned capacity for responding whose persistence over time is by the Retention Tests. Loss of memory strength over time is called forgetting. The Layman and many Psychologoistt too, believe that a change in memory is revealed whenever resention is less than perfect. The chngcs in performance attributed to learning are considered to be relatively permanent, yet an obvious fact of experience in that learned material is not perfectly retained. When retention is measured sometime after the original learning has ended we typically find that some forgetting has taken place. The longer, the interval after learning, the greater the loss in retention. Wundt (1905) observed that the capacity of immediate memory was restricted to about six items when the learning material consisted of items taken in isolation, such as random letters, digits of isolated lines.

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Memory span is a term that refers to the limitation in the amount of data which a subject can absorb in S.T.M. in a single, brief learning opportunity and can recall immediately. If one briefly shows the subject a display of letters or numbers or reads to him a series of letters or numbers depending upon the subjects ability and the type of material, about 5 to 9 items will be correctly reported in an immediate recall test. The memory span is affected by serial variables such as age and sex. In other words, there is a rise and fall in span beause of the difference in age and sex.

There is good evidence that a certain amount of learning tasks place before birth. Certainly, learning on a large scale commences immediately after birth and continuous in definitely from then on. To what extent does the ability to lean vary in a function of age. Learning ability depends on the development of certain capacities of the organism, both sensory and motor. The men or women better learners ? The most valid general answer is "neither". From a number of experimental comparisons of men and women learners, no consistent difference in learning ability between the sexes has emerged. Whatever reliable differences have been found can be ascribed to differences in interest and training. Men may be more efficient in learning methods dealing with mechanical problems while women may have greater proficiency in learning items pertaining to home life. Such results are of course, due to difference in interest and training associated with sex-differences.

Whimbey (1969) studied memory span as a forgetting capacity while Crowder 1969) studied repetition effects in immediate memory when there were no repeated ements in the stimuli. Fuchs (1970), Baddley (1970), Calfee (1970), Dick (1970), uttenlocher (1976), Ratcliff (1978), Chang (1980), Dempster (1981), Masson (1983) d many other Psychologists studied in this field and significant difference have nd. They concluded that immediate memory span is affected by age and sex accordy. Our main problem is whether age and sex are determinants of immediate memory n. Thus, present study is an attempt to explore the effect of age and sex upon the ediate memory span of the subjects.

METHODS

Sample : In the present study the sample has been drawn of 60 students on the random sampling. All the 60 students were in the age range of 8 to d of 20 students each in three age groups. Such as 8 to group having 10 males 10 females, as follows ;

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Age Groups	8 to 10	13 to 15	18 to 20
Boys	10	10	10
Girls	10	10	10
Total	20	20	20
			Total=60

Tools : In the present study data collection required two tools-

1. Tach istoscope.
2. Thre e sets of non-sense syllables from 3 letters to 10 letters and three sets of digits (3 to 1( ) in the series written in random order).

Procedu e of Data Collection : Visual memory span of the subject were determined individua lly by means of a Tachistocope. Nonsense syllables and digits were presented visuall y to each subject. The experiment started with a card of 3 nonsense syllables. On su ccessfull reproduction of the syllables the next card having 4 letters was presented and ve rbal reproduction obtained. When the subject was unable to reproduce or see the letters correctly on a card he was shown a card having the same numbers of letters. If this was correctly reported next, higher card was shown but if the second card of the same num ber o letter was not correctly reported the same number card from the 3rd set w as p esented. If that two was a failure, the experiment was stopped. Thus, the experimen or went on increasing the number of letters in each card till the subject failed to repr oduce correctly the same number thrice. Similarly, the experiment was con ducted with the digits cards also.

Thus, we had three sets of letter cards and three sets of digits card for use with window type Ta chistoscope. The expossure period was fixed at 1/10 second and could not be varied. I Experimental disturbances were controlled and minimized.

RESULTS

Conside ring the groups age wise the differences in the immediate visual memory span wers foun d to be as given in the following table which shows the means of the memory spa ns in the three age groups for Boys and Girls separately.

Table 1

Sex	Age Group I (8 to 10)	Age Group II (13 to 15)	Age Group III (to 18 to 20)
Boys	3·95	4·30	4·95
Girls	3·95	4·40	4·85

The mean Span was calculated for each age group taking Boys & Girls separately. The mean span fo r letters and digits were combined and the average was considered as

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representing the mean span fo the whole group of Boys in the age group. Similarily the mean span for combined letters and digits series was worked out in the case of girls in the same age group. Thus, it was done for the comparison of the memory span in different age groups of Boys & Girls. Subject's *'t'* was calculated to find out if the difference in the memory span of the various groups differed significantly.

A comparison was sought among the three age groups considering the Boys and Girls separately. The following table shows the comparison of the three groups and significants differences as well.

Table-2

Age Groups	Value of 't'		df		Significance Level	
	Boys	Girls	Boys	Girls	Boys	Girls
I & II (8to10-13to15)	.27	1·88	9	9	NS	NS
II & III (13to15-18to20)	.05	.41	9	9	NS	NS
I & III (8to10-18to20)	2·78	2·36	9	9	.05	.05

The following table shows the significant differences of Boys & Girls in the different age groups which are considered together.

Table-3

Age Groups (Boys & Girls)	Value of 't'	df	Significance Level
I and II	1·35	19	NS
II and III	.65	19	NS
I and III	3·75	19	.05

DISCUSSION OF RESULTS

On the basis of the statistical analysis of the data, an attempt will be made here to discuss the results. The study was an attempt to investigate the effect of age and sex on immediate memory span when the material was presented visually to the subjects in order to observe the determing effect of the factor of age on the memory span three age groups of Boys and Girls were selected. The results show that the mean memory span for the boys in the three age groups (8 to 10, 13 to 15 and 18 to 20) were 3·95, 4·30 and 4·95 respectively (table-1).

On calculation of *'t'* (table-2), it was found that the difference between the means of the age groups I & II was not statitically significant. Although, the mean span in the age group II was slightly higher than that in the group I. Similarily, the mean span in the age group III is higher than the mean in the age group II. But,

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the '*t*' ratio indicates that none of these difference is significant beyond .05 level of confidence. If we consider the difierence between the means of age group I and group III. The value of '*t*' is significant beyond .05 level of confidence. This shows that memory span increases with age although the increase is not much.

Exactly similar is the case of girls in the three age groups. Their mean spans are 3·95, 4·40 and 4·85 respectively (table 1). The '*t*' ratio between the age group of I & II, and II & III are not statistically significant but that between I & III is highly significant beyond .05 level of confidence (table-2). This makes quite clear that boys and girls both exhibit clear difference in their memory span with the difference in age. An age increases memory span also increases.

Considering the boys & girls together, if the mean spans of the three age groups are compared with each other the same results are obtained. Increases in the memory span of the group II over group I is not significant. The increases in group III over group II is significant but increase in group III over group I is highly significant beyond .05 level of confidence (table 3).

Moreover, casting a glance on the mean memory spans of the boys and girls in each age groups, it becomes clear that the difference between the two sexes in each age group are not worth considering. However, no computation of '*t*'-ratio between the means of boys and girls in each age groups make it evident that the difference in none of the age groups is statistically significant. This shows that boys & girls of any age group do not exhibit any significant difference in their immediate memory span. If the samples of boys in all the three age groups are combined and the entire groups is compared with the total sample of girls the results is the same. The difference between the mean memory span of the boys and girls does not warrant any difference of significance.

Hence, there is no evidence to say that boys and girls differ in their immediate memory span.

Conclusion : On the basis of the results and their discussions, the following conclusions may be spelled out :

(1) The memory span does increase with age but the increase is slow and becomes marked in age difference is greater.

(2) The difference in the mean memory span of the boys and girls does not give evidence to prove that the boys and girls differ in their immediate memory span.

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A Scale to Measure Attitude of Scientists Towards Teaching

G. Jhansi Rani & S. Venku Reddy*

The present study aimed at evolving an attitude scale to measure attitude of scientists towards teaching. Likert's summated Rating Scale Technique was followed for developing the scale. The validity of the scale was examined with the help of content validity. Test and Retest method was used for testing the reliability of the scale. The reliability coefficient worked out was 0·856 which was quite high. Hence the scale is said to be reliable.

INTRODUCTION

It is an universally accepted fact that the attitudes of an individual play an important role in determining his role performance with respect to a particular object. There is little doubt that the attitudes of scientists towards teaching is of crucial importance in explaining their Teaching productivity. On examination of literature it was found out that there is no standard mearurement for finding out the attitude of scientists towards teaching. Hence an attempt has been made in this study towards evolving a standard scale.

Concept of Attitude —Attitude was defined (Draver, 1952) as "a more or less stable set or disposition of opinion, interest or purpose, involving expectancy of a certain kind of experience and readiness with an appropriate response". Edwards (1957) defined attitude as the "degree of positive or negative affect associated with some psychological

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object'.' Shariff and Cantril (1945) stated that while studying relationship of attitudes of action, an essential feature of an acceptable defintion of an attitude was that "it is a predisposition to action".

Attitude in this study therefore was operationalised as the degree of positive or negative feeling of scientists towards teaching. As pointed out earlier in the absence of suitable instruments measure the attitude of scientists towards teaching, a scale has been developed.

Construction and Standardisation of the Attitude Scale :

For measuring the attitudes, different types of scales developed by Thurstone, Likert, Bogardus and several others differ markedly in type and method of construction, but the objective in every case was to assign an individual a position along a quantitative scale.

The Likert method of summated ratings for measuring the attitudes—In this stduy, measurement of attitude of scientists towards teaching was done by using the Likert method of Summated Ratings for the following reasons :

1. Attitude scales with greater reliability can be developed by this technique. Likert, Roslow and Murphy (1934) have shown that more satisfactory reliability coeffecients could be obtained when each item in a Thurstone type scale was assigned five alternative choices and the points were checked in all items to obtain a total score. Hall (1934) indicated that the Likert type scales with even fewer statements will give high reliability coefficients.

2. The items on a Likert scale provide data on the individual attitudes about the specific issue covered by the single item as well as a total score on the attitude dimension being studied.

3. By using the scale with a new group, the internal consistency and split-half reliability of Likert scale could be quickly checked. Non discriminating items could be eliminated and scores can be calculated from the remaining items. New items could also be added and tested with ease.

The following steps were used for developing attitude scale based on Likert Summated Rating pattern :

Collection of Statements : 63 statements representing the attitude of scientists towards teaching were collected initially from various sources and then edited on the basis of criteria suggested by Thurstone and Chave (1929), Likert (1932) and Edwards (1957). Out of 63 statements collected for measuring the attitude of scientists towards teaching, 30 statements were selected.

Items analysis for Selection of Statements : Statements representing the attitude of scientists towards teaching were administered to 60 respondants (Teachers, Researchers

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and Extension workers of Colleges of Home Science and Veterinary Science). The respondents were asked to indicate their degree of agreement or disagreement with each statement on a five-point continuum ranging from Strongly agree to "Strongly disagree". The pattern adopted was 4 weighs to strongly agree response, 3 to agree response, 2 to undecided response. 1 to disagee response and 0 to strongly disagree response, if it was a favourable attitude statement and for unfavourable attitude statement the scoring pattern was reversed viz., "Strongly agree" response with 0 weight, "agree" with 1, "undecided" with 2, "disagrre" with 3 and "strongly disagree" with 4 wieght in that order. These responses were recorded and the summated score for the total statements was obtained. The scores of the sespondents were arranged in descending order, 25 percent of the highest and 25 per cent of the lowest scores were taken for the item analysis, meaning 15 respondents from the high group and 15 from the low group. These responses were subjected to item analysis for selection of the items that could constitute the final attitude scale.

The critical ratio i. e. *t*-value which is a measure of the extent to which a given statement differentiates between the high and low groups of respondents for each statement was calculated by using the formula suggested by Edwards (1957). As n_H was equal to n_L (15 each) the modified formula for calculating the t-values of the statements was used.

After calculating the *t*-values for all the items of the attitude scale of teaching, the values of the statements were arranged in descending order from the highest to the lowest and 14 statements were selected from the scale whose value were highest i. e. with *t*-values more than 1.75 with almost equal number of both positive and negative statements.

Reliability of the Scale :

Test and Retest method was used to estimate reliability of the attitude scale. The set of the 14 statement which represent the attitude of scientists towards teaching were arranged with the five point response continuum and were administered to fresh group of 30 scientists. After a period of 15 days the scale was again administered to the same respondents and thus two sets of scores were obtained. The correlation coeffecient for the test was worked out which was 0·856 indicating that the attitude scale was highly suitable for administration to scientists as the scale was stable and dependable in its measurement.

Validity of the Scale : One method for determining validity of a scale is to judge what it is that the scale does measure. This method was used in the present scale to determine the content validity of the scale. As the scale value differences for almost all the statements included and a very high discriminating value,it seemed reasonable to accept the scale as valid measure of attitude. Besides judge's rating was also obtained for assessing the content validity of the scale.

The final format of the scale : Following are some of ihe statements that represent the attitude of scientists towards teaching. Against each statement you will find five responses that represent your degree of responses to that statement as Strongly Agree (SA) /Agree(A) /Undecided(UD) /Disagree(DA) /Strongly Disagree(SDA). Please go through the statements carefully and tick mark (√) against the appropriate response category as your response. Please attempt all the statements.

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Statements	Response Categories SA	A	UD	DA	SDA
1. Teaching is the noblest of all professions.	—	—	—	—	—
2. If I had to live my life again I would still be teacher.	—	—	—	—	—
3. Teaching is an ideal job when compared to business and Industry.	—	—	—	—	—
4. I get more personal satisfaction by teaching students of various mental alilities.	—	—	—	—	—
5. Honestlv, I wish I had not become a teacher.	—	—	—	—	—
6. I would recom mend to opt for teaching to any intelligent student.	—	—	—	—	—
7. The eager faces of the students which are present only in teaching, inspire me to do my best.	—	—	—	—	—
8. Teachers are considered as second class citizens, hence I hate to be a teacher.	—	—	—	—	—
9. I am not really interested in teaching as a career.	—	—	—	—	—
10. Teaching is a job like any other jo b.	—	—	—	—	—
11. I do not enjoy teaching and feel no loyality to the profession.	—	—	—	—	—
12. Teachers have maximum respect in the Society.	—	—	—	—	—
13. I prefer to do research rather than to remain as a teacher.	—	—	—	—	—
14. In this contury, teachers do not have respect in the society, hence I dislike to remain as a teacher.	—	—	—	—	—

Administering the final scale : The final scale with 14 statements can be administered to the scientists who will be asked to respond to each item in terms of their own agreement or disagreement. As in the item analysis, the respondents will be asked to indicate their attitudes by selecting any one of the five response categories. The total score of a respondent can be obtained by adding the weights to the response categories assigned on all items i. e, 4 for strongly agree, 3 for agree, 2 for undecided, 1 for disagree and 0 for strongly disagree. The scoring should be reversed for negative statements.

Intrrpretation of Data on Attitude Scale

(*a*) *Expressing attitude scores as* 1 *scores* : It our interest is in the attitude of the single subject relative to the attitudes of other subjects, than scores on summated rating scales can be interpreted in a relative sence. A relative interpretion of attitude scores is made in the same manner in which relative interpretations of scores on other psychological tests are made, that is, in terms of the distribution of scores obtained from a particular group. Mean attitude score for a particular group of subjects can be defined as :

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If the mean of the group is used as point of origin, than each of the individual attitude scores can be expressed as a deviation from this origin. It is assumed that the mean represents the typical or average attitude of group. Then score that are higher than the mean can be interpreted as scores that are more favourable than the average for the group and scores that are lower than mean can be interpreted as scores that are less favourable than the average.

As a convenient frame of reference, the distribution of attitude scores for a given group can be translated into 1 scores in terms of the *T* formula :

Expressing the attitude as T scores yields a new distribntion of scores that will have a mean of 50 and a standard deviation of 10.

b. Determining the degree of attitude of group based on raw scores :

After obtaining the total raw scores, basing on the attitude ecale for individual respondents, the respondents can also be classified into different groups based on mean and standard deviation as follows :

Those with favourable attitude	Mean+S.D and above
Those with less favourable attitude	Mean±S.D
Those with unfavourable attitude	Mean—S.D and below

More meaningful and realistic classification could be attempted as follows basing on total scores obtained by the individuals :

Highly unfavourable attitude	0——14 score
Unfavourable attitude	15——28 score
Favourable attitude	29——42 score
Highly favourable attitude	43——56 score

The study under report was undertaken with the main objective to probe into the attitudes of scientists twoards teaching. The Andhra Pradesh Agricultural University formed the locale of the study. For the measurement of attitudes, a scale was developed following the Likert method of summated ratings . Though the validity and reliability of this scale has been duly tested under Andhra Pradesh Agricultural University conditions, nevrtheless inter-university investigations may be carried out by it to further expand its width of application throughout the country.

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Study Habits of B. Ed. Students

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At present in most of the high schools as well as in colleges a lot of teaching work is done mainly through the chalk and talk method. Teachers speak out certain things in the classroom and the students are made listen it carefully, make notes on important points and try to memorise them. Teachers tell them what to be remembered but very few teachers tell them how to learn, how to take notes and how to study. From a psychological view-point one can say that most of the present day students lack enough motivation to learn or to study. Many of the students lack the appropriate skills needed in the process of learning.

Success in study depends not only on ability and hard work but also on effective methods of study. Jamuar (1959) has mentioned that performance in school and college is not just a function of intelligence but of study habits as well. Some students can do more work in a given time than others, and do it more effectively. This is largely a matter of ability, no doubt, but ability is by no meane the only factor. Many highly intelligent students fail because they do insufficient work, or because thay do not know the art of study. Important study skills such as note-taking, revising and making plans and time-tables have to be learned and practised. Yet very few students get any systematic instruction in this matter. Most have to rely on the study techniques which they have learned at the school level. Even the most gifted students can seldom discover the most effective way of study without the help of others. Therefore Benard (1954) has said that habits are premediated actions. They are not a function of physiology but learned modes of responses to particular stimuli. According to McKinney (1960), these habits of students are influenced by motivation, interest, attitudes, personality tra'ts etc., where as Strang and others (1961) found that levels of aspiration, teaching methods adopted and the material they are to learn.

Various guidance workers have also pointed out from time to time that usually the students do not know what are the good study habits and they are very eager to know about the effective methods of study. Therefore, the need for developing good study habits amongst the students have been felt at all the stages of education. Teachers are the real agents for the same. But if they themselves are weak in this ability, they can not help the student-community in any way. Hence such teachers should be oriented properly in this respect which will be quite helpful in the future. It is, therefore, that the present investigation has a sort of remedial value and will be quite meaningful for the teachers training programme.

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For the sample 25 students were selected on the basis of their result of first periodical test. These sample students were failures or below average cases in compulsory courses. An inventory of Study Habits was administered for pre-test. For the development of study habits, structures lectures were followed by group discussion. The same inventory was administered at the end of the total exposure to find out the effect of guidance work. The scores of each component of pre-test and post-test were converted into percentages and were compared to find out whether the improvement in the study habits of the students corresponds with the improvemeut in their achievement.

FINDINGS

1. In response to study at the fixed hours for every subject regularly, the majority of the students do not plan out their time schedule properly for each subject. But after the feedback and guidance the students have realised the importance of budgeting time and study more effectively. This is shown by the 28 per cent increase in regularity.

2. Before the structured lecture was given a majority of the students had many distractions due to improper place of study, but the post test shows that they have overcome these difficulties by adjusting themselves.

3. Many students had problem of concentrating in their studies, but affer getting guidance and help they have overcome the distracting factors and able to improve their study habit. This is clearly observed in post-test where 40 per cent of students have improved.

4. The investigation shows that 50 per cent students do not have interest in courses of study and 75 per cent do not go to library to refer books.

5. It is also found out that 75 per cent of the students do not read summary or out-line of a chapter, but they try to read the whole part which they fail to uuderstand. But from the post-test it is clear that students have improved and this difficulty has been overcome by 45 per cent.

6. A great deal of students (75 per cent) do not have reference books and other necessary materials for study. Again, 80 per cent of the students did not have habit of taking down notes or important points when they listen or read. After feedback, they realised the importance of taking notes.

7. From the result, it is clear that the students were not taking the summary notes of the material they read, but after the post these the students improved by 30 per cent.

8. Regarding to make use of dictionary while they study, only 20 per cent were using dictionary and 80 per cent were not using dictionary. In this area the students have improved considerably after structured lectures.

9. It is observed hat many of the students do not have skill of reading and they also leck the speed of reading. The students have shown improvement in these difficulties.

10. Due to the medium of instruction a majority of the students do not take notes in class, also they fail to combine the classnotes and the notes taken from the reference work. After the structured lecture they have realised the importance of taking notes, have improved considerably.

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11. A good number of sutdents (80per cent) feel tension before examination and they could not sleep at proper time, but after feedback and guidance, about 20 percant have overcome this difficulty.

12. In response to the statement 'I read the whole question paper first and decide which question I can attempt first' when they read the question paper they start answering, as they think that one should not was the time in reading the questions. From the post-test, it is seen that sudents have improved regarding the preparation for exmainations.

13. Comparing the result of pre-test and post-test, the percentage of failures is reduced (10 per cent) and who were on the boarder line, has also improved in their achievement. Guidelines help them in developing and improving study habits.

CONCLUSION

From the study it is clear that most of the students who do not do well in their studies they hardly study one to two hours daily. They also have many difficulties in their method of study. Many of them find difficulty to follow class lectures due to medium of instruction, some of them do not have proper study place and environment, they de not plan out their study-schedule. Some do not have skill of reading and taking notes in the class and from reference books, many have problem of feeling tension prior to examination, etc.

But after the structured lectures and guidance, the post-test shows that the students have improved in their study habits and their academic achievement. This guidance and special lectures were only for a month, but if they are given this type of guidance for a longer period, there well be no doubt that they will improve in a greater degree. This type of guidance should be given from the beginning of their student carrier. Also this skill of guidance should be developed among the teacher who are constantly taking care of the students and developing their personality. Therefore the improvement of study habit is a necessary factor in students achievement.

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Authoritarian Power and Toughness Among Different Types of Indian Leaders.

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Present study was undertaken to examine the levels of authoritarian power and toughness of different types of Indian leaders and their component sub-leaders. A sample of 1000 Indian leaders of four types (i.e. religious, intellectual, bureaucratic, and democratic) drawn from five Hindi speaking states of India (i.e. Uttar Pradesh, Madhya Pradesh, Rajsthan, Haryana, and Bihar) by way of multi-stage-stratified-quota-random-sampling, was administered the Final Form of California P.—Scale. The responses relating to authoritarian power and toughness were analysed with the help of ANOVA (5×4×5) experimental design) and Duncan's New Multiple Range Test.

The results, in brief reveal that the Indian leaders, as a group are moderately powerful and tough. The intellectual leaders, among different types of Indian leaders, are the least powerful and tough. The other three religious, democratic and bureaucratic leaders who do not differ from one another are higher than intellectual leaders. Among religious the Islamics are found to be more power leaders ful and tough than other religious leaders. The Buddhists are significantly lower than Islamics on this dimension. The Hindus who do not differ from Jains and Christians, are lower than Buddhists and Islamics. The artists, among intellectual leaders, are the least powerful and tough. The literatures are lower than educationists and advocates. The scientists do not differ from literatures and, therefore, they are higher than artists. Among bureaucratic leaders, the Block Development Officers are higher than I. A. S. and P. C. S. Officers on power and toughness. Others (District Planning Officers and Municipal Executive Officers) place themselves in the middle without showing any difference from any type of bureaucratic leader. Among democratic leaders, the Chairmen of Municipal Boards are the least powerful and tough. The Chairmen of District Boards are more powerful and tough than the Chairmen of Municipal Boards and the Members of Parliament. The Block Panchayat Chairmen who do not differ from the Members of Parliament and Members of Legislative Assemblies are higher than the Chairmen of Municipal Boards but lower than the Chairmen of District Boards.

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INTRODUCTION

Authoritarian power and toughness, the sixth dimension of the California *F*-Scale is measured by seven items (i.e. item 7, 10, 11, 19, 22, 23, and 24). An authoritarian admires power in others and submits to authority and, at the same time, asserts with toughness to dominate over others, especially the weak and outgrops. Thus, the main requirement of an authoritarian is to observe a clear-cut leader-follower, strong-week, and superion-subordinate relationships in his interpersonal affairs, and to satisfy himself in either position (Dillehay, 1978).

Despite enough conflicting evidences that the California F.—Scale correlates with its nine dimensions (Bending, 1960 ;Camillieri, 1959 ; Christie and Cook, 1958 ; Eysenck, 1954; Hyman and Sheatsley, 1954 ; Krug, 1961 ; Levinson, 1954 ; Melvin, 1955 : O'Neil and Levinson, 1954 ; Pinilles, 1953 ; Siegal, 1954 ; Wrightsman, 1968) efforts have not been made so far to examine these relationships on the samples of different types of leaders who exercise a considerable amount of authoritarianism in their day-to day lives. Dubey, in a series of studies (1984 a ; 1984 a ; 1984 b ; 1985 a ; 1935 b ; 1985 c ; 1985 d ; 1985 e ; 1985 f), has disclosed that different types of Indian leaders and their component sub-leaders differs significantly from one another on manifest anxiety, persistence -disposition, authorittarianism, authoritarian conventionalism, authoritarian submission, authoritarian aggression authoritarian anti-intraception, and authoritarian superstition and stereotype. Therefore present investigation was designed to examine the levels of authoritarian power and toughness among different types of Indian leaders with a presumption that different types of Indian leaders and different component sub-leaders of different types of Indian leaders would also differ from one another on authoritarian power and toughness.

METHODOLOGY

(a) *Sample* :—One thousand Indian leaders of four types (250 religious, 250 intellectual, 250 bureaucratic, 250 democratic) were selected by way of multi-stage-stratified-quota random-sampling from five Hindi speaking States of India (Uttar Pradesh, Madhya Pradesh, Rajasthan, Haryana, and Bihar). Each of the four types of leaders were comprised of their five component sub-leaders (i.e. Religious : Hindus, Muslims Christians, Jains, and Buddhists ; Intellectual : Educationists, Scientists, Artists, Advocates, and Literature ; Bureaucratic : I.A.S. Officers, P.C.S. Officers, District Planning Officers, Block Development Officers, and Municipal Executive Officers ; and Democratic : Members of Parliament Members of Legislative Assemblies, Chairman of District Boards, Chairmen of Block Panchayats, and Chairmen of Municipal Boards).

(b) *Research Tools* :—The Final From of California F.-Scale (Adorno *et al*, 1950) and its Hindi adaptation (Dubey, 1984 c) were selected as the research tools. The reliability and validity of both of these versions were found quite satisfactory on Indian samples (Dubey, 1984 d).

(c) *Procedure* :—The distrcts from each of the five Hindi speaking States of India were randomly selected. The Chairmen of these selected District Boards were requested to

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select one Member of Parliament, one I.A.S. Officer, one Hindu religious leader, and one Educationist from their district areas. The selected Members of Parliament were requested to select one Member of Legislative Assembly, one District Planning Officer, one Islamic religious leader, and one Scientist from their Parliamentary Constituency areas. The selected Members of Legislative Assemblies were requested to select one Chairman of Block Panchayat, one P.C.S. Officer, one Jain religious leader, and one Artist from their Legislative Assembly Constituency areas. The selected Chairmen of Block Panchayats were requested to select one Chairman of Municipal Board, one Block Development officer, one Christian religious leader, and one Advocate from their Block Panchayat areas. The selected Chairmen of Municipal Boards were requested to select one Municipal Executive Officer, one Buddhist religious leader, and one Literature from their Municipal areas. Thus, the whole sample was combrised of four types of leaders each type of leader was comprised of its five component sub-leaders; and each unit of component sub-leaders was comprised of its ten units from each of the five states of Itdia In other words, one samyle =5 States×4 Leaders×5 Componeot sub-leaders ×10 elements=100 elements.

The selected elements were mailed the California F.—Scale—one in Hindi and the other in English—alongwith one printed appeal, one self-addressed duly stampped envelop, and one personal request-cum-instructions letter, guiding the way of recording the responses aud returning the responded questionnaires. This process of data collection was very difficult and time and money consuming. But, somehow, repeated reminders, contacts through personal friends and, in some cases. personal contacts of the investigator could fetch all the responded questionnaires. Then, the responses relating to authoritarian power and toughness were analysed with the help of ANOVA (5×4×5 experimental design) and Duncan's New Multiple Range Test.

RESULTS AND DISCUSSIONS

Table-1 : Complete Analysis of Variance for authoritarian power and tughness.

Sources of Variation	Sum of squares	*df*	Mean Squares	*F*
Treatments :	9906·344	99	100·064	8·310**
States (A) :	85·694	4	21·423	1·779
Leaders (B) :	589·368	3	196·456	16·316**
Sub-leaders (C) :	2168·514	4	542·128	45·027**
(A) × (B)	340·842	12	28·403	2·359**
(A) × (C) :	89·586	16	5·599	0·465
(B) × (C) :	5851·362	12	487·655	40·502**
(A) × (B) × (C) :	780·478	48	16·259	1·350
Error (Within) :	10836·600	900	12·040	——
Total :	20742·944	999	——	——

* *F*-Ratios are significant beyond ·01 level of confidence.

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The General Mean and Standard Deviation for the whole data (Mean=33.08 S.D. =4.55) indicate that Indian leaders, as a group, are slightly deviated toward positive direction of authoritarian power and toughness. The complte Analysis of Variance, as shown in Table No. 1, indicates significant variations among four types of Indian leaders (F=16·316, df=3/900, p<.01) and among different component sub-leaders of different types of Indian leaders (F=45·027, df=4/900, p<.01). However, these variattons are not free from two bi-variate interactions (AB:F=2.359,df=12/900, p<.01 and BC;F=40.502, df=12/900p-<.01). Hence, Duncan's New Multiple Range Test was invited to examine ahe significance of differences.

Table-2 : Duncan's New Multiple Range Test applied to the differences among four types of Indian leaders. (N=250 in each case). (*).

	(1)	(2)	(3)	(4)	Shortest
	I. L.	*R. L.*	*D. L.*	*B. L.*	Significant
Means	31·808	33·164	33·620	33·744	Ranges (·01).
IL=31·808	——	1·356	1·812	1·936	R_2=0·799
RL=33·164		——	0·456	0·580	R_3=08·33
DL=33·620			——	0·124	R_4=0·856
	I. L.	*R. L.*	*D. L.*	*B. L.*	

(*) Any two treatment Means not underscored by the same line are significantly different.

(*) Any two treatment Means underscored by the same line are not significantly different.

Duncan's New Multiple Range test, as applied to the difference among four types of Indian leader (Table No. 2), reveals that intellectual leaders (Mean=31·808) are significantly lower than other Indian leaders on authoritarian power and toughness. The other Indian leaders; i. e. the religious leaders (Mean=33·164), the democratic leaders (Mean= 33·620), and the bureaucratic leaders (Mean=33·744), do not differ from one another. Thus, the intellectual leaders are distinguished from all other Indian leaders.

Among component sub-leaders of the religious leaders of India (Table No. 3), the Islamics (Mean=41·28) are superior to all other religious leaders. The Buddhists (Mean =34·38) are lower than Islamics on authoritarian power and toughness. The Jains (Mean =28·36), though not different from Hindus (Mean=29·86), are significantly lower than Christians (Mean=31·38), Buddhists, and Islamics on this sub-scale. These results, thus, indicate that religious backgrounds play important role in shaping the levels of authoritarian power and toughness.

In the case of component sub-leaders of intellectual leaders of India (Table No.4), the Artists are found to be significantly lower (Mean=25·15) than other intellectual leaders on authoritarian power and toughness. The Literatures (Mean=31·58); though not different from Scientists (Mean=33·22), are higher than Artists. The Educationists (Mean=

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Table. 3. Duncan's New Multiple Range Test applied to the differenes among five component sub-leaders of religious leaders of India. (N=50 in each case). (*).

	(1) Jains	(2) Hindus	(3) Christ.	(4) Buddhi.	(5) Islamic	Shortest Significant Ranges (·01).
Means	28·36	29·86	31·38	34·38	41·28	
Jain = 28·36	.....	1·50	3·02	6·58	12·92	R_2=1·782
Hind = 29.86	.....	.....	1·52	5·08	11·42	R_3=1·867
Chri = 31·38	.....	.....	.....	3·56	9.90	R_4=1·919
Budd = 34 94	.....	.....	.....	.....	6·34	R_5=1·954
	Jins	*Hindus*	*Chris*	*Buddh.*	*Islamic*	

Table. 4. Duncan's New Multiple Range Test applied to the differences among five component sub-leaders of intellectual leaders of India. (N=50 in each case). (*).

	(1) Art.	(2) Lit.	(3) Sc	(4) Edn.	(5) Ady.	Shortest Significant Ranges (·01).
Means	26·15	31·58	33·22	33.84	34·24	
Art = 26.15	.....	5·43	7·07	7·69	8·09	R_2=1.782
Lit = 31·58	.....	.....	1.64	2·26	2·66	R_3=1·867
Sc. = 33·22	.....	.....	.....	0·62	1·02	R_4=1·919
Edn= 33·84	.....	.....	.....	.....	0·40	R_5=1·958
	Art.	*Lit.*	*Sc.*	*Edn.*	*Ady.*	

(*) Any two treatment Means not underscored by the same line are significantly different.

(*) Any two treatment Means underscored by the same line are not significently different.

33·84) and the Advocates (Mean=34·24) who do not differ from each other, are found to be superior to all the intellectual leaders under comparision. The Scientists place themselves in the central-middle of all the intellectual leaders showing superiority over Artists only. These results contribute to this fact that the levels of authoritarian power and toughness are determined by different intellectual faculties.

Table No. 5 showing significance af differences among five component sub-leaders of bureaucratic leaders of India, depicts that the I. A. S. Officers (Mean=32·58) and Block Development Officers (Mean=35·05) are the only bureaucratic leaders who show significant differences from each other. The former are lower than the latter on authoritarian power and toughness. Among others, i. e. the P. C. S. Officers (Mean=32.66), the District Planning Officers (Mean=34.14), andtthe Municipal Executive Officers (Mean=34.30), the renge of scores is too narrow to communicate any significant difference. These results, other then the differences between I. A. S. Officers and Block Development Officers, clearly indicate that increasing bureaucratic hierarchy is followed by the decreasing authoritarian power and toughness.

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Among component sub-leaders of democratic leaders of India (Table no. 6) the Chairmen of Municipal Boards (Mean=13.20) are found significantly lower that the Chairmen of District Coards (Mean=35.06). The embers of Parliament (Mean 1 33·16), though not different from the Chairmen of Municipal Boards, Chairmen of Block Panchayats. (Mean= 33·88), and the Members of Legislative Assemblies (Mean=34·10), are also lower than the Chairmen of District Boards. In other words, the District Boads. Chairmen show more authoritarian power and toughness than others. The Chairmen Municipal Boards are the lowest on this sub-scale. Others fall in between these two without showing any significant difference from any democratic leader under comparision. These results.aiso contribute to this fact that different democratic organizational leaderships require different levels of authoritarian power and toughness.

CONCLUSION

In the light of foregoing results and discussions it is concluded that.

1. Intellectual leaders are lower than other Indian leaders on authoritarian power and toughness.
2. Different religious backgrounds play significant role in determining the levels of authoritarian power and toughness.
3. The Islamics are higher than other religous leaders on authoritarian power and toughness. The Buddhists are lower than Islamics but higher than the remaining three religious leaders. The Jains are lower than Christians, Buddhists, and Islamics. The Hindus do not differ from Jains and Christians
4. Different intellectual faculties contribute to determine the ltvels of authritarian power and toughness differently.
5. The Artist are the lowest scores in comparision to other intellectual leaders on authoritarian power and toughness. The Literateurs are higher than Artists but lower than Educationists and Advocates. Neither Literateurs differ from Scientists not do the Scientists from Educationists and Advocates.
6. The Scale places the I. A. S. Officeres at the bottom and the Block Develop-met Officeres at the top. However ther bureaucratic leaders who are placed in between these two extremists do not show significant differences from one another.
7. The Chairmen of District Boards are equipped with more authoritarian power and toughness than other democratic leaders, though they do not differ from Members of Legislative Acsemblies, and the Chairmen of Block Panchayats. These three are higher than the Chairmen of Municipal Boards, The members of Parliament are lower than the Chairmen of District Boards only.
8. Increasing bureaucratic hierarchy seems to be followed by decreasing authoritarian power and toughness.
9. Different democratic organizational leaderships require different levels of authoritarianp ower and toughness.

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Identification of Variables of Educational Environment as Related to the Acquisition of Mathematical Concepts at the Junior Secondary Stage

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The study is based on a sample of 510 students of grade VIII. The present study reveals the fact that the variables of intelligence, SES, father's income, education of the parent, academic and professional qualification of the teacher, use of A. V. aids by the teacher, feedback given by the teacher, school size and teacher pupil ratio significantly influence the acquisition of mathematical concepts. The study concludes that those students who had high intelligence, high socio-economic status, parents education above graduation and were studying in big schools where teacher pupile ratio was about 1 : 20 and were being taught with the help of A. V. aids by teachers with post graduate qualifications scored high mean scores on tests of mathematical concepts).

Educational environment according to Dave (1963) relates to "the conditions, processes and psychological stimuli of the total environment which effect child's academic achievement including concept acquisition." Hunt (1966) defined concept learning as ,acquisition or utilization or both of a common response to dissimilar stimuli.

Conceptual understanding of mathematics at each developmental stage is likely to be influenced by the multiplicity of factors. Variables of educational environment such as student's intelligence, sex differences, socio-economic status of the family, income of the father, education of the parents, qualification of the teacher, use of A. V. aids by the teacher, feedback given by the teacher and structure of the school e. g. size of the school a. d teacher-pupils ratio, etc. may influence the aquisition of mathematical concepts.

Kiler and Rowley (1964), Roach (1979) and Maqsud (1980) have established the superiority of intelligence as a major factor influencing academic achievement. Dhaliwal and Parkash (1976) in their study reported insignificant '*r*' of ·26 between intelligence and Achievement in mathematics. Lalithamma (1975) and Julia (1980) found positive significant sex-differences in respect of achievement but Sharma (1977) observed no significant differences in the achievement of boys and girls in arithmetic.

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Lalithamma (1975) and Vijaya Lakshmi (1980) observed that the achievement in mathematics was positively related to SES of the children whereas findings of Reddy (1973) and Bansal (1977) revealed that SES was not significantly related to achievement. Chopra (1967) studied matched pairs of achievers and under-achievers and found that farhers of achievers had comparatively greater income, However, Long and Resh (1976) found no significant differences. Joshi and Sharma (1969) concluded that poor achievement was due to the low educational standards of the parents.

The study conducted by and Veldman Brophy (1974) showed that better qualified and trained teachers do affect student achievement which is significant.

Seth (1975) finds that audio-visual aids were found to be more beneficial for girls of lower intelligence group-as compared to the girls of higher intelligence. In their study Cobb and Hops (1973) and peeck (1279) concluded that the active feed back group did slightly better than passive feedback group which in turn did slightly better than no feedback group.

In case of school structure variables study conducted by smith (1961), wilson and aren (1976) favoured that the performance of students belonging to large schools are etter than smaller schools. But wiseman (1964) found no relationship between size of the chool and achievement.

Confrontation with certain controversies as to the nature of various variables of f educational enviroment and its relationship with the academic achievement as a result of view of related studies, the present study was undertaken to identify the factoas which go ith the acquisition of mathematical concepts among students at the junior secondary age.

METHODOLOGY

Design : Two way analysis of variance with the variables of students, home, acher and school structure an one source of variation and mathematical concepts, split to arithematic, algebra and geometry as another source of variation was employed in spect of each of the discrete variables. The criterion was taken in terms of mathematical ncepts scores, Each of the student variable was varied in two ways, intelligence-high) and low (G_2) ; sex-male (G_4) and female (G_2) ; SES was varied in three ways-high (G) ddle (G_3) and low (G) ; father's income in four ways below Rs. 400/-(G) ; from Rs. -Rs. 800/-(G) ; from Rs. 801 to 1200/- (G_3) above Rs. 1200/-(G_4) ; eduation of the rents was varied in three way-illiterate (G), upto graduation (G_2), above graduation (G) In case of teacher variables, qualification was xaried in two ways-graduate (G.), t-graduate (G_2), professional qualification in two ways-B. Ed. (G_1) M. Ed, (G_2), use of -yes (G_1) or No (G_2) feedback in two ways-yes (G_1) or no (G_2)

In case of school structure variables, size of the school wascvaried in two ways- o 1 : 20 (G_1), above 1 : 20 (G_2).

Sample : A sample of J10 students in the present iovestigation was raised on the s of multistaged stratified randomization of population.

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Tools : 1. Jalota (1972) Group Test of general mental ability (72).
2. Passi (1965) Numerical ability test.
3. Joshi (1969) Algebraic concepts Test.
4. Geometric Concepts Test-Standardised by the investigator.
5. G. Trivedi and Udai Pareek Socio-economic Status Scale.
6. Student Information Proforma.
7. Teacher Information Proforma,
8. School Information Proforma.

DISCUSSION

In case of intelligence, the F-ratio of 4·83 comes out to be significant at 0·1 level. It speaks of significant differences among two groups of subjects as classified on the basis of intelligence (table 1) t-value for high and low int. groups also comes out to be significant at ·05 level. The mean proformance of high int. better than the low int. group on mathematical concepts acequisition. The inssgnificant F-ratio in case of sex-differences may be explained on the basis of study by Anastasi (1958) who reported in gederal female have been found to excell in reading and male ic arithmetic but the differences have varied with age, SES, IQ and specific sub skill to 7e measured.

From table 1 also, in case of SES the F-ratio 12·004 for df 2/81 was found to de significant at ·01 level. From table 2, it was found that t-ratio between G_1G_2, G_1G_3 and G_2G_3 were found to be significant. Also mean scores of subjects under high level of SES group was better than that of average SES and low SES groups. These results are supported by Lalithamma (1975).

Table-1 :Summary of two way anglysis of variance

Design	Sourde of variation	Total sun of squares	df	Mean square variance	Sration	Level of significanc
	Intelligence (A)	152·78	1	152·78	4·83	·01
×3	Maths conceps (B)	141·36	2	70·68	·853	—
	A×B	104 12	2	52·06	·532	—
	Within	3858·79	84	34·08		
	Sex differences (A)	193·49	1	193·49	2·666	—
3×3	Maths concepts (B)	168·40	2	84·20	0·986	—
	A×B	126·40	2	63·70	0·740	—
	Within	1722·24	84	85·36		
	SFS (A)	1722·86	2	861·43	12·004	·01
×3	Math concept (B)	157·26	2	78·63	1·090	—
	A×B	1206·81	4	51·72	0·720	—
	Within	5822 60	81	71·76		
	Father Income (A)	2112·06	3	704·02	7·435	·01
4×3	Math concept (B)	261·14	2	130·57	1·379	—
	A×B	520·99	6	86·83	0·917	—
	Within	15906 54	168	94·68		
	Education of parents (A)	726·84	2	363·42	3·273	0·5

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3×3	Math concept (B)	52·58	2	26·29	0·259	—
	A × B	701·96	4	175·49	1·709	—
	Within	3595·60	35	102·65		
	Qualification (A)	5893·89	1	5893·89	70·535	·01
2×3	Math concept (B)	175·55	2	87·77	1·050	—
	A × B	74·10	2	37·20	0·445	—
	Within	14539·27	174	83·50		
	Professional qualification (A)	1445·00	1	1445·00	16·784	·01
2×3	Math concept (B)	32·01	2	16·00	0·185	—
	A × B	185·30	2	94·01	1·092	—
	Within	14979·54	174	86·06		
	Use of aids (A)	1525·42	1	1525·42	16·675	·01
2×3	Math concept (B)	136·63	2	68·31	0·746	—
	A × B	93·80	2	46·54	0·508	—
	Within	15917 07	174	91·47		
	Feed back (A)	3537·80	1	3537·80	36·364	·01
2×3	Maths conc pt (B)	504 01	2	252·00	2·590	—
	A × B	257·00	2	128·85	1·324	—
	Within	15927·74	174	97·26		
	Size of the school (A)	464·01	1	464·01	5·812	·01
2×3	Math concept (B)	842·08	2	421·04	5·016	—
	A × B	181·40	2	90·77	1·156	—
	Within	13655·37	174	78·47		
	Teacher pupil ratio (A)	1359·76	1	1355·76	23·016	·01
2×3	Maths concept (B)	106·33	2	53·44	0·923	—
	A × B	44·40	2	22·27	0·334	—
	Within	10071·14	174	57·88		

The effect of the father's income was significant because F (3·168)=7·435. Further from table 2 no significant t-ratio were found from G_1 G_2, G_1 G_3 G_2 G_4 and G_2 G_4 but the G_2 G_3 group showed significant *t*-ratio (=1·179). According to these results it appears that greater the income of the father, the more will be the performance of the child. The finding obtained from this study resemble to that of the finding of Chopra (1967).

It was found that education of the parents has a significant F-ratio at ·05 level. From table 2, t-ratios between G_1 G_2 and G_1 G_3 groups were significant at ·01 level. Also the mean scores of subjects of three groups suggested that the performance of G_3 group is better than the other two groups. The results are in line with the finding of Joshi and Sharma (1969).

The effect of the academic qualtification of the teacher was found to be highly significant (*F*=70·53). It was also observed from table 1 that professional qualification of the teacher has F-ratio 16·784. In case of qualification of the teacher, though the t-ratios of G_1 G_2 for all the three concepts were significant (table 3) but children tended to score higher in all concepts under G group. The finding is in agreement with those of sparks (1960), Veldman and Brophy (1974). Further in cass of professional qualification when t-test was applied, the differences in performance were all in favour of the students to hwom M.E.d teachers (G_2) were teaching.

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The variable of use of aids, when tested in terms of F—ratio was fouud significant (F=16.67). On this variable significant t-ratios were obtained between G_1G_2. It was observed that the mean score of subjects undes use of aids group was higher then that of no use of aids group.

In case of significant F—values of feed back variable, t-rrtios were calculated. The mean score of subjects as given intable 3 in dicates the superiority of feedback (G_1) over no feedback group. (G_2). Cobb and Hops (1973) have also reported the superiority of feedback over that of no feedbadk. The better performance of feedback group may be due to the fact that feedback acts as a knowledge of results and hence proved to be a motivatonal factors (Vroom, 1964).

Table-2 : Showing t-ratio to locate groups of student and home variables on the basis of F-ratio.

	Group	M	SD	df	Between grops	*t*-ratio	Level of significance
Int	1	54·84	28·91	42	1 and	22·39	·05
	2	41·38	22·27	42			
SES	1	54·23	8·98	27	G_1G_2	2·70	·01
	2	48·00	8·85	27	G_1G_3	5·03	·01
	3	43·56	7·33	27	G_2G_4	2·11	·05
Father's income	1	43·73	8·87	42	G_1G_2	-3·81	—
	2	51·60	10·53	42	G_2G_3	-2·86	—
	3	49·15	9·06	42	G_1G_4	-4·13	—
	4	52·13	10·12	42	G_2G_1	1·179	·05
					G_2G_4	-0·24	—
					G_2G_4	-1·45	—
Education of the parents	1	60.62	8·73	12	G_1G_2	2·78	·01
	2	78.42	9·42	12	G_1G_3	2 81	·01
	3	86.57	9·27	12	G_2G_3	1·69	—

Table-3 : Variables showing t-ratio to locate groups of teacher and school structure variable on the basis of F-ratios.

Name of variables	Groups	Arithmetic (df=58) M	SD	t	Algebra (df 58) M	SD	t	Geomtary (df=58) M	SD	t
Academic Qualifications	1	43·76	9·23	-5.73**	46·66	11·31	-489**	46·23	8·38	3·95**
	2	56·60	8·05		58·43	6·69		55·80	10·24	
Professional Qualifications	1	48·30	8·35	2·34*	49·33	9·10	-1·32	45·33	9·98	3·42**
	2	53·93	10·18		52.60	10·00		54·30	7·91	
Use of A. V. aids	1	494·13	76·93	2·41*	527·30	85·96	2 87**	501·40	91·98	1 97
	2	439 46	97·73		451·50	115 41		454·53	89·94	
Feed back given	1	52·10	6·90	0·12	50 90	10·22	1·49	49·63	8·52	2·32*
	2	51·83	10·12		47 36	7·91		14·16	9·67	
Size of School	1	50·16	7·33	2·03*	48·66	9·44	2·44*	46·90	6·34	3·36**
	2	54·06	7·47		53·50	5·59		53·20	8·02	
Teacher pupil ratio	1	49·46	6·59	-1·21						
	2	52·03	9·53							

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In case of the size of thes chool, F—ratio of 5.912 for df=1/74 comes out to be significant at .01 level (Table 1). Results of table 3 reveals the inferior performances of G_1 group to the G_2 group

On the variable of teacher-pupils ratio it was fround that groups differ significantly (F=23.42). It was revealed fromtable 3 that mean performance of group I is greater than G_2.

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Relationship Between Psychology and Science Curricula

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Need for the Study : It is a well know fact that the significance of the study of Psychology can not be overemphasised because of the complexities of the problems confronted with by humanbeings in various walks of life of this dynamic world. It is in this way, Psychology is being taught as an optional subject at Higher Secondary stage in Tamil Nadu. This obviously assumes that the needed background in Science for the learning of psychology at HSS is provided well within the Primary and Secondary stagis of education. It is in this context that an analysis of the science curricula at primary and secondary stages in terms of the preparation to the learning of Psychology at higher secondary stage in Tamil Nadu has been aimed and at hence the present investigation is entitled 'Relationship between psychology and Science Curricula".

Objective of the Study : The specific objectives of the study are listed below :

1. To analyse the Higher Secondary Psychology Curriculum in Tamil Nadu for the Science Content used and the sequence in which they are encountered.
2. To analyse the Science Curriculum of Standards I to X in Tamil Nadu for the content and sequence in order to determine the degree of provision of prerequisite background for the learnig of Psychology at higher secondary stage.
3. To compute the Co-ordination Ratio between higher secondary Psychology and Science at primary and secondary stages of education in Tamil Nadu.

METHODOLOGY

'Content Analysis' as a method of research was employed in the present study.

A. Collection of Curricular Documents : The syllabus and text books of Stds. XI and XII in Psychology, and the syllabus of Stds. I to X and text books of Stds. III to X in Science published by the Directorate of School Education, Govt. of Tamil Nadu were collected from the authorities concerned.

B. Analysis of Curricular Documents : The syllabus and books of Psychology were analysis and the sequence of science concepts used in Psychology was noted down. The content and sequence of science of science curriculum were analysed against the content and sequence of those concepts noted. This was done to finud out whether a particular concept used in Psychology (for example, IMAGES in Std. XII, psychology) has been taught in science in the primary/secondary stage. The details of analysis are given in Table 1.

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C. Computation of 'Co-ordination Ratio'. 'Co-ordination ratio' refers to the degree to wich science programme provides adequate background for the learning of psychology. It is computed by assigning a positive value to each concept that is taught before that is used in psychology programme Then the total of positive values is devided by the total concepts used in psychology. It is shown in Table 1 that 31 science concepts are used in psychology. All these 31 concepts are taught before its application in psychology. Hence the co-ordination ratio is found to be 31/31 = (Vide Table 2).

ANALYSIS AND DISCUSSION

I. Inter-relations between the application of science concepts in psychology and the teaching of these concepts in science classes.

Table-1 : Details of inter-relations between the employment of science concepts in psychology and the teaching of these in science classes.

Sl. No.	Science concepts used in psychology	Std. in which used in Psycho-logy	Std. in which taught in science	Before (B)/ Same (S)/ After (A)/ Never (N)/	Co-ordination o.
(1)	(2)	(3)	(4)	(5)	(6)
1.	Environment	XI	VII	B	+
2.	Experimental Method	XI	VI	B	+
3.	Growth and devolopment of human body	XI	VIII	B	+
4.	Refiex action	XI	XI	B	+
5.	Nervous system	XI	XI	B	+
6.	Structure and functioning of brain	XI	IX	B	+
7.	Eye	XI	IX	B	+
8.	Ear	XI	IX	B	+
9.	Skin	XI	XI	B	+
10.	Steam engine	XI	X	B	+
11.	Balance	XI	IX	B	+
12.	Respiration	XI	VIII	B	+
13.	Acceleration due to gravity	XI	VIII	B	+
14.	Pressure	XI	IX	B	+
15.	Images	XII	IX	B	+
16.	Planets	XII	VII	B	+
17.	Mammals	XII	VIII	B	+
18.	Sound	XII	VI	B	+
19.	Light	XII	VI	B	+
20.	Oscillation	XII	VIII	B	+

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21.	Energy	XII	VI	B	+
22.	Ductless glands	XII	XI	B	+
23.	Human body systems	XII	VIII	B	+
24.	Elasticity	XII	VIII	B	+
25.	Lever	XII	VIII	B	+
26.	Momentum	XII	X	B	+
27.	Time	XII	VI	B	+
28.	Electricity	XII	VII	B	+
29.	VIBGYOR	XII	VIII	B	+
30.	Living beings	XII	VIII	B	+
31.	Reflction	XII	VIII	B	+

It is evide t from the table given above that all the 3' science concepts used in higher secondary psychology have mell been taught within secondary school science in Tamil Nadu.

II. Co-ordination Ratio.

Table-2 : Co-ordination ratio between higher secondary psychology and secondary science programmes.

Total no. of Science concepts used in psychology	Total positive values	Co-ordination ratio
31	31	31/31=1

It is quite heatening to note that the co-ordination ratio between higher secondary psychology and science at primary and secondary stages of education in Tamil Nadu is found to be one (1), the maximum possible.

CONCLUSION

The major conclusion emerged out of the present study is that the pri-requisites in Science, for the learning of Psychology at Higher Secondary stage, are well provided within the Secondary School Science in Tamil Nadu.

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Evaluation of Achievement in Education Subject

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'Education' is taught as one of the optional subject at degree stage. This practice is in vogue in certain States of our country. Teaching of 'Education' is very popular in the State of Orissa. Facility for 'education' exists at M. A. stage, at honours stage, at pass stage and at +2 stages. The subject is an expanding one. Students are attracted to this subject because of the provision that a student passing B. A with 'Education' can appear at B. Ed. Examination as private candidate.

Education students study theoretical courses and also undertake practical work. The students of Intermediate classes give practical lessons in one subject, taught at school stage. The number of lessons covered by them is 10. The evaluation of lesson is not done during practice teaching period. The supervision of lessons is unscientific and careless. The observer stays in the classroom for a few minutes only. In many cases the practice is also followed at the time of evaluation of a single lesson caaled as final lesson for the purpose of university examination. Such types of evalusion practices are bond to be invalid and unreliable. These practical marps might not be in tune with the general achievement of the student. It may be interesting to final out the extent to which the marks in theory, practical and total marks secured in education correlate with marks secured in other subjects and total marps secured by candidates.

For the purpose of comparison, the average marks and standard deviation of the marks of 24 students of a college were computed. Standard score in each of the subjects were found out. The result was as follows :

STANDARD SCORES IN VARIOUS SUBJECTS

	E D U C A T I O N					English	oriya	Pol. Sc
Grand Total				Theory	Total			
	-Practical	Theory I	Theory II	Total				
4	10.8	3·8	2·5	3.7	4·6	3·7	4·3	4·9

The table clearly points out that practical mark has been nearly two and a half times of the general aggregate. The practical mark also has been responsible in improving the performance in Education subject. Instead of high percentage of maps in practical, the achievement in Education is less than that of political, science. The yard stick maesuring education and political science are different The examination is theoretical, completely

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in case of political science and partial in case of education. Assuming that examiners in these two subjects have been judicious in their jobs there is reason to believe that the teaching of education might have been poor or the questions that have been put to students might be defective, or the students might have note got their expected question.

The anlaysis also indiactes the excessive marks secured in education practicals. This might be one of the reasons for attracting some students. The practical marks are biased as they are based on a observation of lessons for a few minutes. There is a need to introduce the system of evaluation by observing for a full period of teaching. This will increase the reliability and validity of the practical marks. In other subjects the candidates do particular piece of work and they are evaluated on the basis of the result. But the practice is not followed in education. It should be changed.

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Communal Stereo Types

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INTRODUCTION

If in most western countries it is the scoial malady of social prejudice that one comes across. in India, it is communal prejudice that one encounters. In the United States of America the average American, it is said, prefers to keep people of different groups at different distances. In a study by Bogardus, for instance, Americans are reported to have shown the greatest preference for Canadians and the smallest preference for Turks (Bogardus, 1925). Bogardus' study was carried out on the pacific coast. Studies made by other social scientists in the other parts of the United States have yielded more or less similar results (Katz and Braly 1933). Obviously, there is thus much agreement among Americans about foreign groups. Will there be similar agreement among the people of Kerala with regard to the different communal groups that live in the State ? An attemot was made here to answer this question indirectly by studying what groups of post-graduate students in Kerala belonging to different cummuities thought about the various communal and caste groups found in the State.

It is true that people belonging to the different commuuities in Kerala live together in the small State thus getting ample opportunity for personal contact wsth each other, and that the ideas that they entertain in their minds about the people of the different communal groups with the State come mainly from their personal contact with them. But it is still possible that not all their ideas are born out of their personal experience, and that in many instances they are supplied with ready-made sets of ideas about members of other gronps. If this is true, then each communal group in Kerala should be having a number of pet notions about other communal groups and should be not only thinking and feeling but also be acting in the light of such notions. This is a dangerous situation and is what the social scientist will describe as a situation arising from the high prevalence of stereotypes.

As studies conducted in India on communal stereotypes are very limited, studies on racial stereotypes etc. conducted in the other parts of the World are examined below to see what sort of results are generally got in investigations like the one proposed here.

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Gilbert (1951) studied stereotype persistence and stereotype change among college students. The principal conclusion that was drawn from his study was that the present generation of college students was more rulectant than the previous generation to make stereotyped generalizations about the character of ethnic groups, especially about those with whom they had little contact. Some students regarded it as almost an inault to their intelligence to be required to make such generalizations, while others generelize with considerable reservation. On the whole it thus appeared that the college students of today made fewer generalizations about ethnic character, and that those they did make tended to be based more on cultural and historical realities and less on fictitions caricatures and the prejudices of their parents.

Bayton *et. al.* (1965) studied how members of a minority group perceived differently the personality chasacteristics of their own group the personality charcteristion of members of majority groups. Thev felt that at least three dimensions were involved in this process namely, the trait being stereotyped, the sex of the members of the group being assessed, and the sex of the individuals doing the stereotyping. Gardner *et. al.* (1972) observed how subjects who stereotyped one oup-gruop tended to stereotype others also.

Sagar and Schofield (1980) examined the way in which the interpretation of ambiguous social behaviour could become influenced by racial stereotypes and cultural differences. One of the conclusions they arrived at was that both black and white pre-adolescents rated ambiguous, aggressive stimulus figures as more threatening when the perpetrator of such aggression was black than when h was white. White children tended to read threat into ambiguously aggressive behaviours involving no physical contact more than black childern did. Blacks, whether they were the perpetrators or recepients of aggressive behaviours got rated as stronger than their white counterparts.

Stereotypes are (as is well known, ready-made sets of ideas about outgroups handed over by society to its members. They are seldom checked with facts and as such are often at variance with facts. Moreover, they almost always place the people about whom they are held at a disadvantage. Lippman (1922) thinks that stereotypes are over simplified pictures individuals have about other groups of people. To Robin and Williams (1947), stereotypes attribute a cluster of traits to idnividuals as representatives of a group. In one respect, they are ac luster of cognitive judgments implying a set of behavioural expectation. In another respect, they involve a set of evaluations.

Allport (1954) believes that stereotypes need not always be negative and that they can exist together with a favourable attitude. To him, whether favourable or in-favourable "a stereotype is an exaggerated belief associated with a category. Its function is to justify (rationalise) our conduct in relation to that category." Young (1957) states that by strict logic a stereotype ia a false concept. To him, it is a word or phrase used to give agroup general and abstract characteristic which are not supported by sound reasoning or scientific investigation.

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According to Brown (1965), stereotypes often imply a faulty assumption that important traits are inborn. Stereotypes to him, reflect a general ethnocentric tendency, to think of one's own group as 'right' and good and of sliens as 'wrong and bad'.

Hall and Lindzey (1970) think that personifications shared by a number of people are stereotypes. To them, stereotypes are consensually validated conceptions, i.e. ideas which have wide acceptance among the members of a society and are handed down from generation to generation.

INDIAN STUDIES

In a study by Sinha and Upadhyaya (1960) to investigate the change and persistence in the stereotypes of 200 students of Patna University toward Indians and eight other ethnic groups arrive at the following findings :

(a) The pre-existing stereotypes toward all ethnic groups, excepting the Chinese, remained almost unchanged. The change in the case of chinese was a marked one.

(b) The data for the preferential ranking for association bear striking resemblance to the findings based on the analysis of the percentages of desirable, undesirable, and neutral characteristics assigned to the different ethnic groups. The Chinese were placed at the bottom for preference for association.

To study stereotypes of four Hindu castes about each other, Natraj (1962) has taken a sample of 83 girl students of Maharani's College, Mysore. This group consists of 30 Brahmins, 28 Lingayets, 15 Vokkaligas and 10 Harijans. He indicates the following conclusions.

(1) The total group possesses most favourable mental picture of Lingayets and least favourable picture of Vokkaligas.

(2) Brahmins, Lingayets and Vokkaligas have over estimated mental pictures about themselves as compared with the group picture (estimation) about each one of them. Whereas Harijans have an under estimated favourable mental picture about themselves as compared with the group and the other three castes.

(3) Lingayets and Vokkaligas have highly overestimated favourable mental pictures about themselves.

A survey of students' National stereotypes toward 13 national groups was conducted by Hafeez Zaidi (1964) with a sample of 214 students of the University of Karachi. With a given list of 60 adjectives, the respondents were asked to assign as many adjectives as they thought most fitting to each national group. He concludes that they assigned most favourable adjectives to their own national group.

In a study on communal stereotypes in Kerala, E.I.George and V. George Mathew (1970) conclude that Christians and Brahmins get the largest proportion of desirable qualities, Scheduled Caste are liked least, while Nairs and Muslims get the middle position. They also point out that people tend to attribute more favourable qualities to their own community than to others. According to Jayakumari (1981) stereotypes seem to have the following characteristics :

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1. They are clusters of attributes ascribed to members of a group.
2. They are generally not based on facts and are just over simplified beliefs.
3. They are shared by large numbers of people.
4. They may present a good or bad picture of the group.
5. They are passed on generally by word of mouth from generation to generation.

THE STEREOTYPES CHECK- LIST

A group of 53 post-graduate students were asked to list all the charateristics which they thought were typical of the seven communities namely Nairs, Catholics, Brahmins, Harijans, Ezhavas, Muslims and non-Catholics. When its list was ready repetitions were eliminated and the list of 63 was reduced to 55. Characteristics which occurred in the mind of the investigator were added to this, and a final list of 58 adjectives (in the Malayalam language) was made. About 600 copies of this list were printed. The adjectives were numbered from 1 to 58 and were printed on the right-hand side of the paper. On the left-hand side, seven columns were printed, each column having a community name (Ezhavas, Catholics, Brahmins, Harijan, Nairs, Muslims and non-Catholics) as its head-line. Copies of this were distributed to the 558 post-graduate students of Kerala who heard the following instructions read out to them. "Read through the list of adjective presented before you. Write the serial numbers of those adjectives whish you think suit a typical Ezhava in column 1. You may write as many serial numbers as you want. If you do not find proper adjectives in the list before you to describe a typical Ezhava, you may write in column 1, those adjectives which you think are necessary for adequately describing him. When you have finished, do the same thing in connection with a typical member of the catholic community mentioned in column 2. Proceed like this with each community till you finish the last-mentioned community namely non-catholic Christians.

When the subjects completed their task, they were given further instructions as mentioned. "Write in the blank space on page 5 of the inventory, the names of the seven communities in the order of your preference for them, i. e., the community you prefer most first, the community that you prefer next second, and soon till the community that you prefer least is mentioned last".

After collecting the answered inventories back from the subjects, the 58 adjectives were presented to a group of 50 college teachers. These were asked to rate (using a rating scale running from 0 to 10) each adjective on the basis of its desirability as a human characteristic. From this, the average desirability value of each adjective was determined.

ANALYSIS OF THE DATA

Of the 558 inventories administered to post-graduates of Kerala, only 503 were found scorable (55 inventories were found carelessly responded to). The data emerging from these 503 were analysed from two different angles.

The seven communities were treated separately. First the frequency with which each adjective was attributed to a community by the community under analysis was counted. This number was multiplied by the average desirability value of the adjective in

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question. The products arrived at like this in connection with all the adjectives attributed to the community were then added together and this aggregate was divided by the total number of assignments to that community. This yielded the average desirability value for that community. The average desirability values secured by the seven communities from the hands of the community under analysis were calculated, thus and ranked. This gave the rank order in what was called Indirect Ranking. Then similar analyses were undertaken with regard to the other communal groups also and each community had seven rank-positions as assigned to it by the seven communal groups. These ranks are given in Table-I. The seven ranks of each community were then averaged so that each community ultimately had just one average rank-position only in the Indirect Ranking procedure.

Table-1 : Rank order of the seven communities in terms of the desirability value of the adjectives ascribed to them (Indirect Ranking).

	Names of Communities Assinging Ranks						
Ranks	Brahmins	Nairs	Non-Catholic Christians	Catholics	Muslims	Harijans	Ezhavas
1.	Brahmins	Nairs	Non-Catholic Christians	Catholics	Muslims	Harijans	Ezhavas
2.	Nairs	Brahmins	Catholics	Non-Catholic Christians	Non-Catholic Christains.	Ezhavas	Non-Catholic Christains.
3.	Non-Catholic Christians	Non-Catholic Christians.	Brahmins	Brahmins	Catholics	Non-Catholics Christians.	Catholics
4.	Catholics	Catholics	Nairs	Nairs	Brahmins	Catholics	Brahmins
5.	Ezhavas	Ezhavas	Ezhavas	Ezhavas	Nairs	Muslims	Nairs
6.	Muslims	Muslims	Muslims	Muslim	Ezhaves	Nairs	Muslims
7.	Harijans	Harijans	Harijans	Harijans	Harijans	Brahmins	Harijans

The Direct Ranking made by the subjects was also treated rather similarly. Here the average rank secured by each community from the hands of each communal group was calculated. This procedure gave a set of seven average ranks for each community. These are given in Table-2.

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Table-2 : The Seven Communities in the order of preference (Direct Ranking).

Rank	Name of the Communicaties Assignig Ranks						
	Brahmins	Nairs	Non-Catholic Christtans	Catholics	Muslims	Harijans	Ezhavas
1.	Brahmins	Nairs	Non-Catholic Christians	Catholics	Muslims	Harjains	Ezhavas
2.	Nairs	Brahmins	Catholics	Non-Cotholic Christains	Harijans	Nairs	Nairs
3	Non-Catholic Christains	Non-Catholic Christians	Nairs	Nairs	Nairs	Muslims	Non-Catholic Christians
4.	Catholics	Ezhavas	Ezhavas	Ezahavas	Brahmins	Non-Catholic Christians	Catholics
5.	Ezahavs	Catholics	Brahmins	Brahmins	Non-Catholic Christians	Catholics	Brahmins
6.	Muslims	Muslims	Harijans	Harijans	Catholics	Brahmins	Harijans
7.	Harijans	Harijans	Muslims	Muslims	Ezhavas	Ezhavas	Muslims

From this, the Mean rank-postion of each community was calculated.

It was thought desirable to assess the degre of agreement between Direct Ranking and Indirect Ranking. So, for this, Spearman's Rank Oider Correlation was computed between the two rank orders. The results of the computation are given in Table 3.

Table-3 Correlation between Direct Ranking and Indirect Ranking.

Names of the Communities	Average ranks in Direct Ranking	Average ranks in Indirect Ranking	d	d^2
Nairs	1	4	3	9
Non-Catholic Christions	2	1	3	1
Catholics	3	2	1	1
Brahmins	4	3	1	1
Ezhavas	5	5	0	0
Harijans	6	6	0	0
Muslims	7	7	0	0
Total :		$P=0{\cdot}78$		12

Here, the seven communities were treated together as forming one single sample. Then, in the total number of assignments of adjectives to each community, the frequency of the occurrence of each adjectives was estimated. Following this, the number of adjectives required to cover 50% of the assignments was counted. This procedure gave indices of the clarity of the stereorypes held about the different communities. The seven communities ranked in the order of this clarity can be seen in Table-4.

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Table-4 : Relative Clearity of Stereotypes (Communities Ranked).

Names of the Communities	Number of traits required to cover 50% of assignments	Rank
Krahmins	17·14	1
Harjains	17·30	2
Non-Catholic Christians	17·40	3
Catholics	17·60	4
Muslims	17·70	5
Nairs	18 07	6
Ezhavas	22·60	7

THE FINDINGS

In the first analysis, both when directly asked and indirectly asked, each community was found to mention itself as the community most liked by it. in fact, it was expected that there could be near perfect correlation between Direct Ranking and Indirect Ranking. But as shown in Table-3, the Spearman Correlation between the two rank orders was only 0.78. This not very high correlation resulted probably because of the differences between the ranks obtained by the Nairs, the non-Catholic Christians, the Catholics, and the Brahmins in the two rankings. While in Direct Ranking, the Nairs secure rank I, in Indirect Ranking their rank dwindles down to 4. In the case of the non-Catholic Christians and the Catholics, the diffrences are less, yet noticeable. In Direct Ranking, the non-Catholic Christians attain rank 2 and the Catholics attain rank 3, whereas in Indirect Ranking the non-Catholic Christians rise to rank I and the Catholic rise to rank 2. Unlike all these, there is perfect agreement the ranks obtained by the Ezhavas the Harijans and the Muslims in the two rankings.

One may wonder why the two rankings are so different from each other and why the correlation between the two rakings is only 0·78. One possibility Is that while in Indirect Ranking, the subjects take an analytical attitude, in Direct Ranking they are infiuenced by some recent experience with some member of the community in question. If this hypothesis is true, Indirect Ranking becomes more representative of the true attitudes of the subjects towards the different communities that Direct Ranking.

Table-4 indicates the clarity of the stereotypes about the seven communities. Stereotypes about six of the seven communties (Brahmins, Harijans, non Catholic Christions, Catholics, Muslims and Nair) appear more or less eually clear. Stereotypes about the Ezhava community appear much less clear.

A comparative study of Table 3 snd 4 reveals certain interesting points. For example, both in Direct and Indirect Ranking, the Ezhavas secure a ratcer low rank. Yet in Table 4 which indicates ranks in terms of the clarity of the steseotypes their rank is not high, This shows how although belief in the undesirable charecteristics of a communal gaoup can highten the prejudice against that group. It is not neeessary to have a clear set of stereotypes to other expressions of severe prejudice.

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As metione dearliar, stereotypes are handed down to each generations by the previous generation, and are propagated and perpetuated through popular sayings, short stories, novels, cinemas, radio-plays, television programmes, and such things. Kerala is a small state, and a keralite generally gets ample opportunity to come into contact with members of all communities. His experience with members of these communities may not be in agreement with the wrong stereotypes that he holds. Still he clings into his wrong beliefs because when meeting a member of another community it is not to the person who is actually present before him that he reacts but to the instant categorization that he makes in his mind with regard to the community of the person. It is possible that often the experience that he gets from his contact with a member of a community contradicts his private belief regarding the members of that community. But in such ases he considers the person who provides the contradicting experience to him as an exception that proves the rule. As Krech and Crutchfield (1948) say "Other things being equal a change introduced into the psychological field will be absorbed in such a way as to produce the smallest effect on a strong structure. This ....takes cognizance of the stability of man's strongest beliefs despite the prevalence of facts contradicting such beliefs and despite personal experiences with such facts....."

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Measurement of Scientific Productivity

G. Jhani Rani* & S. Venku Reddy & G. Nageswara Rao*****

Measurement of Scientific Productivity of the scientists will facilitate any organisation for developing the system of performance appraisal. Based on the appraisal, it is possible to motivate the scientists for higher productivity. So far all the studies conducted on scientists were centred round on measuring only their Research Productivity, more specifically in terms of publication behaviour. Scientists in Agricultural Universities are expected to perform three important functions, namely-Teaching, Research and Extension. Hence an attempt has been made to identify the indicators and to develop a measurement to measure Scientific Productivity of Agricultural scientists. However, this measurement could also be applied for measuring Teaching, Research and Extension Productivity of scientists separately.

In this study the Scientific Productivity was operationalised as the work outcome of a scientist (Teacher, Researcher and an Extension worker) in the areas of Teaching, Research and Extension in a unit span of time.

As a prelude to measure Scientific productivity of Agricultural scientist, a list of indicators of Teaching, Research and Extension productivity were prepared separately and were sent to different experts (Deans of Agriculture, Directors and Professors of Extension Education totaling to 84) throughout the country to identify whether they really contribute for productivity and also to rate them in the order of their importance on five-point continum. They were also requested to feel free to add some indicators, if they feel important, and also delete unrelated indicators. Responses were obtained from 47 experts which were scored and coded properly. After obtaining the responses, mean for each indicator was calculated by giving arbitrary scoring of 5 for very important indicator, 4 for important indicator, 3 for less important indicator, 2 for least important indicator and 1 for not related indicators. The list of indicators with mean values is given in the following page..

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List of Indicators with Mean Values

Indicator	Mean score
A. Teaching Productivity :	
1. Teaching Students (No. of students taught by the teacher, total no, of courses taught to different types of students, total number of credit hours taught by the teacher, and no. of times he has taught during the unit period).	.. 4·2286
2. Additional Teaching Activities (No and quality of seminars, talks given in other institutions and also in the same institution in which he is working, in addition to regular teaching).	.. 3·9714
3. No. of times a teacher acted as an expert member/examiner, no of selections attended by the teacher as Chairman, no. and type of thesis evaluated, no. of times he acted as question paper setter and evaluated answer scripts etc.)	.. 3·5142
4. Books published (No. of books published, no of editions, quality of the book etc. authorship for the book etc.)	.. 4·0286
5. Output as an advisor (No. of students for whom the teacher acted as an advisor, participation of scientist in co-curricular activities, Rural agricultural work experience programme etc.)	.. 4·2000
6. Teaching efficiency (Personal, Subject matter and manner of presentation etc.)	.. 4·7714
B. Research Productivity :	
1. Innovations for a scientist's credit (No. of innovations, quality of innovations, nature of innovations etc.)	.. 4·6857
2. Guidance to students (No, of students guided, type of students (M. Sc., Ph, D), quality of the thesis etc.)	.. 4·3428
3. Publication behaviour (No. of articles published, the type of Journals in which they are published, frequency of publication, whether the scientist is the sole author or co-author etc.)	.. 4·4285
4. Research projects completed (No. of projects, single or group project, quality of projects etc.)	.. 4·4857
C. Extension Productivity :	
1. Training productivity (No. of farmers trained, No. of extension personnel trained, others trained, no. of times a scientist is engaged in training activities etc.)	.. 4·5143

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2.	Output through extension literature (No. of folders, leaflets, booklets published, quality of the literature, frequency of publication etc.)	..	4·3428
3.	Information services (No. of farm and home broadcasts and telecasts, frequency of the programmes etc.)	..	3·8857
4.	Farm Advisory Service (Advising the farmers on latest Agricultural Technology through individual contacts continuing education through correspondence courses etc.)	..	4·4286
5.	Adaptive trials and Demonstrations (No. of field trials conducte, no. of group meetings organised, No. of demonstrations conducted etc.)	..	4·5143
6.	Communication and Management skills of the extension worker	..	4 6000

As almost all the indicators had mean range between 4·7714 and 3·5142, i. e., above 3 5, all of them were considered for the final study. Thus for the function of teaching 6 indicators, research 4 indicators and for extension 6 indicators were identified. After selecting the indicators, again they were sent to the experts (numbering 84) throughout the country for assigning weightages and responses were obtained from 38 experts. As mentioned earlier, Scientific productivity of scientists was measured as an output of teaching, research and extension work to be carried out by a scientists working in an Agricultural University as an aggregate model. Also scientist is supposed to do all the three functions i. e,, teaching, research and extension as per Agricultural University Act. They were requested to assign relative weightages to the major indicators and sub-indicators under each function i. e., teaching, research and extension. They were also made clear that the maximum possible score for each of the major functions they can assign was kept as 100 and also the weightage they assign to a major indicator should be the aggregate of the weightages assigned to the sub-indicators. Likewise, the weightages assigned to all major indicators under each function should be 100. After obtaining responses from experts for all indicators and sub-indicators, means were calculated and these means were considered as weightages for those items. The list of indicators and sub-indicators along with weightages is presented here.

EXPERTS' WEIGHTAGES

TEACHING PRODUCTIVITY, MAJOR INDICATORS AND SUB-INDICATORS

(Maximum Possible Score : 100)

1.	Teaching Students		(26·00)
	a) Number of students taught		...4·55
	b) Type of students taught (B. Sc., M. Sc., Ph. D)	... 5·75	...11·15
	c) Number of courses taught	... 5·40	

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(d)	Total number of credit hours taught	... 6·15		
(e)	Number of times a scientist (teacher) taught during the unit period.	... 4·15	...10·30	
2.	Additional Teaching Activities			(10·70)
(a)	Number of talks/seminars given in addition to regular activities :	5·95		
	(i) in the same department	...1 225		
	(ii) in other departments	...1·275		
	(iii) in other colleges	...1·575		
	(iv) in some other organi— sations/institutions	...1·875		
(b)	Quality of paper	... 4·75		
3.	Number of times a scientist (teacher) acted as an expert member :			(12·70)
(a)	Number of selections (interviews) attended by the teacher as Chairman	... 2·525		
(b)	Number of thesis evaluated by the scientist (teacher)	... 2·675		
(c)	Type of thesis evaluated (M. Sc., Ph. D)	... 2·525	... 5·200	
(d)	Number of comprehensive viva-voce conducted for different types of students		...2·00	
(e)	Number of times he acted as Question paper setter.	Own—0·5 Others—1 00 ... 1·50		
(f)	Number of times he evaluated answers scripts of the students	... 1·475		
4.	Books Published			(13·65)
(a)	Number of books published	... 3·45		
(b)	Number of editions	... 2·00		
(c)	Whether the scientist (teacher) is the first author or second author or single author for the book	.... 2·65		
(d)	For whom the book is intended i. e. B. Sc., M. Sc. Ph. D, or to all categories.	... 2·40		

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e) Quality of the book ... 3·15

5. Output as an Advisor (9·40)

a) Number of students for whom the scientist (teacher) acted as an adviser. ... 4·40

b) Participation in Rural Agricultural Work Experience Programme ... 2·70

c) Participation of (teacher) scienti t in cocurricular activities like NSS, Literary activities etc. ... 2 30

6. Teaching Efficiency : (27 55)

a) Personal Factors (appearance, delivery, gestures, voice, fluency etc) ... 6·88

b) Presentation (Introduction, Treatment, Teaching aids, Questions and answers) ... 9 65

c) Subject Matter (Adequacy; break-up, balanced coverage etc.) ... 11 02

RESEARCH PRODUCTIVITY
(Maximum Possible Score : 100)

1. Innovations: (31 5)

a) Number of innovations to the credit of a scientist (Researcher) ... 9·40

b) Number of years taken for inventing an innovation ... 4·30

c) Whether the innovation is of his own or in collaboration with others ... 4·85

d) Nature of innovation—whether basic or development over the previous one. ... 4·45

e) Quality of innovations ... 8·50

2. Guidance to Students : (19·45)

a) Number of students guided for thesis work. ... 7 35

b) Quality of thesis ... 6·25

c) Whether major or minor advisor ... 5·85

3. Publication Behaviour : (26·05)

a) Number of thesis published (of his students) in a book form. ... 4·75

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b)	Publication pattern of thesis	...	4 05
	(i) Completely published 2·55		
	(ii) Partly published 1·50		
	(iii) Unpublished 0 00		
c)	Type of publications	...	5·45
	(i) Research articles 2·80		
	(ii) Research notes 1·475		
	(iii) Popular articles 1·175		
d)	Frequency of publications	...	3·30
e)	Type of journal in which they are published	...	5 025
f)	Mode of preparation of articles	...	3·475
	(i) Singly	...	1·775
	(ii) First author	...	0·8
	(iii) Second author	...	0·6
	(iv) Third author	...	0·3

4 Research Projects Completed (23·00)

a)	Number of research projects Completed	...	6·85
b)	Completed in prescribed time	...	2·00
c)	Whether the project undertaken singly or as group project	...	5·15
d)	Quality of research project	...	9·00

EXTENSION PRODUCTIVITY

(Maximum Possible score 100)

1. Training Productivity (27·25)

a)	Number of personnel trained	...	4·55
b)	Type of personnel trained i. e. farmers, SMSs, VLWs etc.	...	4·45 } 9 00
c)	No. of training programmes arranged/conducted by the Extension scientist.	...	5 60
d)	Whether he is the course co-ordinator or simply trainer or both	...	4 10
e)	Duration of training programme	...	3·75
f)	Training materials and aids developed by the extension scientist	...	4 80

2. Output through extension literature : (10 9)

a)	Number of extension publications	...	4·50

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b)	Frequency of publications	... 2·90
c)	Type of publications—Bulletins, Folders, Leaflets, Booklets etc.	... 3·50
3.	Information Services :	(10·85)
a)	Number of broadcasts for scientist's credit	... 2·95
b)	No. of telecasts for a scientist's credit.	... 2·95
c)	Number of exhibitions organised by the scientist	... 3·10
d)	Number of filmshow organised by the scientist	... 1·85
4.	Farm Advisory Services :	(19·85)
a)	Number of farmers advised	... 6·00
b)	Number of innovations communicated	... 5·85
c)	Number of times a scientist is engaged in advisory activities	... 4·65
d)	Nature of his involvement in correspondence courses	... 3·35
5.	Adaptive Trials and Demonstrations :	(15·15)
a)	Number of demonstrations laid down by the extension scientist	... 5·75
b)	Number of field trials conducted by the extension scientist jointly or singly.	... 4·55
c)	No of field trips and other activities undertaken by an extension scientist such as Kisan melas, group discussions etc.	... 4·85
6.	Communication and Management skills	(16·00)
a)	Communication skills	... 8·00
b)	Management skills	... 8·00

For calculating the score, a scientist had obtained for an item, the arbitrary scoring given to that particular item was multiplied by the weightage given by the experts,

Validity : The validity of the measurement of the Scientific productivity was obtained through content validity by taking the judges' opinion regarding the adequacy of each indicator and sub-indicator for measuring the Teaching, Research, Extension and overall Scientific Productivity. The measurement was validated by 47 judges drawn from the country. Besides, thorough scrutiny of the contents was also done by the advisory committee members. Thus it satisfied the content validity.

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Reliability. For calculating the reliability Test-Retest method was employed. The questionnaires covering the details of indicators and sub-indicators were sent to 30 respondents who were other than sample respondents After a lapse of 3 months, they were again administered with the same measurement, in the form of questionnaire. The coefficient of reliability was calculated between the first and the second administered scores. The coefficient of reliability was fairly high (0·88) and was significant at 0·01 level of probability thereby showing that the measurement was reliable.

However for want of time, other forms of validity and reliability although initiated could not be completed at the time of writing this report.

1. Teaching Productivity

Teaching productivity of a scientist was computed by adding the scores of all teaching activities which he had performed during the productivity period. For this variable, experts had identified 6 major indicators. They are as follows :

(a) **Teaching students**—This was operationalised as total number of courses taught specifying total number of credit hours including how many times a scientist has taken a particular course to different number and type of students during productivity period. The score for this indicator was computed by adding the scores of all subindicators. The sub-indicators are :

(i) No of students taught. Depending upon the type of students a scientist has taught, 30 undergraduate students were taken as one unit, 10 postgraduate students as one unit and 5 doctorates were taken as one unit. All these units were summed up to get the total units This was multiplied by the weightage given by experts (4·55) to get the score a scientist had obtained for number of students taught.

(ii) **No. of courses taught to different types of students** : Depending upon the number of years required to take a degree after passing intermediate, irrespective of number of students, if a scientist had taught undergraduates, a score of 4, postgraduates a score of 6, doctorates a score of 9 were given. The total score of this sub-indicator thus was computed by adding the scores obtained after multiplying the number of courses with the scores on type of students taught and multiplying this figure with the weightage given by the experts (11 15) for that particular sub-indicator.

(iii) **Total number of credit hours taught and number of times a scientist had taught during the unit period.** Number of times a scientists had taught a course for different students during the unit period was multiplied by its corresponding credit hours taught after converting every practical hour taught into 2 hours of theory. This procedure was repeated for all the courses taught by the scientist. The products of above multiplications was summed up. This summed up score was subjected to multiplication with the weightage given by judge (19·3) to obtain the score on this particular sub-indicator.

(b) **Additional Teaching activities** : Was operationalised as the number of talks/ semimars given by the scientist in the department, in other departments of Andhra Pradesh

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Agricultural University, in other Colleges of Andhra Pradesh Agricultural University and in some other organisation/institution during productivity period and rating the quality of paper and presentation by him according to his own judgement.

The score for this indicator was computed by adding the scores of sub-indicators, "No. of talks/seminars and also the quality of paper". The sub-indicators are :

(i) **Number of talk /seminars given in addition to regular activities.** To calculate the total score for this sub-indicator, number of times a scientist had given talks/seminars was multiplied by the weightage given to the place of talks/seminars (in the same Department, in other Departments of Andhra Pradesh Agricultural University, in other Colleges of Andhra Pradesh Agricultural University, in some other organisation/institution) and this was summed up.

(ii) **Quality of paper :** was operationalised as the content of the talks/seminar papers and also the details about the clarity of presentation of the paper as judged by the scientist To measure this sub-indicator, 8 criteria were developed and against each item, 3 types of responses were given as good, average, poor. Respondents were asked to place a tick mark (√) against the items in the appropriate columns. An arbitrary score of 3 for good, 2 for average and 1 for poor were given. The total of this multiplied by the weightage (4·75) given by the judges gave the score on this item.

(c) **No. of times a teacher acted as an expert member/examiner** : was operationalised as number of times a scientist acted as Chairman or member, or expert for the interviews and as external examiner for evaluating thesis of different types and number of students and for conducting thesis and comprehensive viva-voce. This indicator also included as how many times a scientist had set question papers for different students of his own and other Universities and also as to how many times he evaluated answer scripts of students of his own and other Universities.

The scores of all these items were summed up to get the score on the major indicator, "No of items a teacher scientist acted as an expert member/examiner" under the function 'teaching'. The sub-indicators included are :

(i) **Interviews attended by the Scientist** was considered as to how many times a scientist had attended the interviews (selections) for selecting candidates for different positions (anywhere) as Chairman or as an expert or as a member of an interview committee. An arbitrary score of 3 for Chairman position, 2 for an expert position and 1 for member position were given and these scores were multiplied by their respective number of times. Again this total score was multiplied by the judges weightage (2·525) to get the score on the item "interviews attended by the scientist".

(ii) **Thesis evaluated by the Scientist.** Number of thesis of M.Sc. and/or Ph. D evaluated by a scientist during the productivity period were considered for studying this sub-indicator. To measure this item, 3 columns were provided with number of thesis evaluated in first column, an indication whether it is an M. Sc. thesis or Ph. D. thesis in other columns. The number of thesis irrespective of the type were divided into 5 categories

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as follows and an arbitrary scoring of 0, 1,2,3, 4 for each category was given. Scientists were asked to place a tick mark against each item and under the columns M. Sc. and Ph. D, To measure this variable, arbitrary scores of number of thesis were multiplied by the score given for type of thesis and this was summed up.

Category	Score
0	0
1-5	1
6-10	2
11-15	3
16 and above	4

The summed up figure was again multiplied by the weightage given by the judges (5·2) to get the total score on this item.

(iii) **Examiner for Viva-voce** : Like the earlier sub-indicator, to study this, number of thesis and/or comprehensive viva-voce conducted by a scientist for different types of students was considered. It the scientist had attended thesis viva-voce, an arbitrary score of 2 and for comprehensive viva, a score of 1 were given and this arbitrary score was multiplied by number of times which again was multiplied with the score given for different types of students and this was summed up. The whole figure which was obtained as a result of these multiplications was again subjected to multiplication with the weightages given by the judges (2·00) to get the total score on this sub-indicator.

(iv) **Question paper setting for the students of own and outside Universities** was operationalised as to the number of times a scientist had set question papers for different types of students of his own University and also for different students of outside university in the span of productivity period. To measure this indicator, number of times was multiplied by the scores on different types of students and this was summed up which was again multiplied by the weightages given by the judges differently to question paper setting for students of his own University (0·5) and differently for the students outside University (1·00) to get the total score on this item.

(v) **Evaluation of answer scripts** : This was operationalised as the number of times a scientist had evaluated answer scripts of the students of his own University and also the students of other Universities. No. of times were grouped into 5 categories as nul, 1-3, 4-6, 7-9, 10 and above, and an arbitrary scoring of 0 for nil, 1 for 1-3 ; 2 for 4-6 ; 3 for 7-9; 4 for 10 and above was given. If a scientst had corrected answer scripts of students of his own University, a score of 1 and if he had corrected answer scripts outside his Univetsity, a score of 2 were given. Scientists were asked to place a tick mark against number of times and number the columns 'own university' and 'outside university'. The score given to own university and/or other university was multiplied by the respective scoring given to number of times and the totals were summed up. This summed up score was multiplied by the corresponding weightage given by the judges (1·475) to get the total score on the sub-indicator, "evaluation of answer scripts by the Scientist."

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(d) **Books Published :** Operationally, it was considered as number of books published including number of editions brought out alongwith rating of quality of book in the span of productivity period for different categories of students by the scientist as single author or first or second or third authors. Total score on this indicator was equal to the pooled score of individual sub-indicators. Sub-indicators are :

(i) *Number of books published* : This was operationa lised as the total number of books published by the scientist on his name in the productivity period. To get the score on this item, number of books published was multiplied with the weightage (3·45) given by judges to that particular sub-indicator.

(ii) *Number of Editions* : was operationalised as the number of editions of books brought out in the productivity period. To get the score on "Number of editions", this item (number) was multiplied with the judges' weightage (2·00).

(iii) *Authorship for the book* : For the published books in the productivity period, whether the scientist was the single author or first author or second author or third author was ascertained. An arbitrary scoring of 4 for single author, 3 for first, 2 for second and 1 for third author were given which was multiplied by the number of books for his credit. This total figure was multiplied by judges' weightage (2·65) for that particular item to get the score a scientist received for authorship for his books.

(iv) *Clientele of the books* was operationalised as the type of people for whom the book was written. 4 types of people were given and against them the respondents were asked to place a tick mark (√) in the appropriate column. An arbitrary score of 1, if the book was meant for undergraduates, 2 for postgraduates, 3 for doctorates and 4 if the book written was meant for all categories was given. The total of the arbitrary scores was multiplied by the judges' weightage (2·4) to get the total score on this sub-indicator.

(v) *Quality of the book* was operationalised as general excellence of the contents of the book. The respondents were asked to rate the quality of book on 3 point continuum. scores of 3 for good, 2 for average and 1 for poor were given and this was multiplied by the weightage given by judges for this sub-indicator (3·15) to get the total score.

(e) **Ontput as an advisor** : was operationalised as the type of advise given by scientist respondents to different number of students including his participation in co-curricular activities like NSS, NCC, literary competitions etc. The total score for this indicator was calculated by adding the scores of individual sub-indicators. The sub-indicators are :

(i) *Students advised* : In Andhra Pradesh Agricultural University some undergraduate students are assigned to a teacher for advisory work. The scientist was asked to give the number of students advised by him during the productivity period. The students were grouped. The students were grouped into 5 categories and an arbitrary scoring of 1 for 11-20 students, 2 for 21-30 students, 3 for 31-40 students, 4 for 41-50 students, 5 for 51 and above students was given and this was multiplied by judges' weightage (4·40) to compute total score.

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(*ii*) *Participation of scientist in co-curricular activities.* Was operationalised as number of times, a scientist had participated irrespective of his nature in cocurricular activities like NSS, NCS, literary competions etc. To get the score on this item, total number of times a scientist had participated was multiplied by the weightage (2·30) given by experts.

(*iii*) *Participation of Scientist in Rural Agricultural Work Experience Programme*: The scientist's participation in Rural Agricultural Work Experience Programme of the University was considered as one of the sub-indicators. For every 25 students of one group participating along with the scientist, a score of 1 was given and this total score was multiplied by the weightage of judges (2·70) to get the score on this item.

(*f*) *Teaching efficiency* : Objective evaluation of teachers is periodically done to improve the teaching and to measure his performance. Performance of a teacher essentially depends on his knowledge of the subject, ability to communicate, application of new teaching techniques etc. Evaluation of teaching in Agricultural Universities is a continuous process. Individual teacher assessment is part of such an evaluation. As it is very much essential for the teacher to evaluate his students it is equally necessary, if not more, for the teacher to get himself evaluated. And who can evaluate a teacher more effectively ? Teacher evaluation can be done in 3 ways (Venkayya, 1974) They are self-evaluation, student evaluation and evaluation by Deans, Principals and Heads of Departments. But because of practical difficulties in this study, only "self evaluation" was used, though while standardising the instrument to measure teaching efficiency of a teacher, student evaluation also was used. Even though there is a possibility of scoring one self high on this instrument by self-rating, since it is uniformly applicable for all teachers it was thought that it will not affect the results of Correlation, Regression and Path analysis although the productivity scores may be little high. However, adequate care was taken to standardise and stabilise the instrument on a mini scale. Teaching efficiency of a teacher was operationalised as below. It includes personal factors, presentation of the subject matter and the adequacy as well as recency of the subject, voice, delivery, style, fluency and the capacity of the teacher etc.

To measure the above attributes of a teacher (scientist) a score card developed by Bhaskaram and Somasundaram (1974) was used. It has 3 main items (personal, presentation and subject matter) which were again divided into various sub-items. The maximum possible score was kept as 100 for all the 3 items put together. Against each sub-item the maximum possible score a person can score was given under the column "actual score" and against each sub-item, respondents were requested to write the realistic number which they felt appropriate to them. The scores obtained for each sub indicator were multiplied with the corresponding weightage given by judges. Then the actual scores obtained after multiplication with weightages for each sub-indicators were summed up to obtain the total score on Teaching efficiency. The total score thus obtained was decided by 10 keeping in view the total weighted scores of other indicators. Thus Teaching efficiency score for each respondent was calculated.

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All the respondents, irrespective of their nature of work were requested to fill up the score card on teaching efficiency, eventhough they have not served as a teacher during the productivity period.

Reliability of the score card : In this study, reliability of the score card was determined by Test-Retest method. Using the test-retest method of reliability, the items (score card) were administered twice to the same respondents (30 scientists of non-sample respondents) at 15 days interval. The two sets of scores obtained for each one of these respondents were correlated. The two sets of scores obtained for each one of these respondents were correlated. The correlation coefficient obtained was $r=0{\cdot}857$ which was significant at 0 01 level of probability indicating a high degree of dependability of the instrument for measuring teaching efficiency of a scientist.

After getting the Teaching productivity scores of total respondents, they were divided into 3 categories bassed on Arithmetic Mean (M) and Standard Deviation (SD) as :

1.	Highly productive scientists	$M+\frac{1}{2}$ SD & above	.. Score of 1055·34 and above
2.	Average productive scientists	$M\pm\frac{1}{2}$ SD	.. Scores between 294·7 – 1055·33
3.	Less productive scientists	$M-\frac{1}{2}$ SD and below	.. Scores of 294·71 & below

2 Research Productivity

Research productivity of a scientist was calculated by adding the scores of all research outputs which a scientist had achieved during the productivity period. For this variable, experts have identified 4 major indicators. They are :

(*a*) *Innovations for a scientist's credit* : Was operationalised as the number of innovations invented by the scientist together with the time taken for inventing them either on his own or in collaboration with others during the productivity period. It also includes the nature and quality of the innovations. The score on this indicator was computed by adding the scores of all sub-indicators. The sub-indicators are :

(*i*) *Number of innovations for a scientist's credit* : To compute the score on this item, score of 1 for each innovation to the credit of the scientist was given and this was multiplied by the weightage given by experts (9 40).

(*ii*) *Own or collaborated innovations* : If the innovations invented by the scientist are of his own, then only the number of own innovations were multiplied by the weightage given by judges for that sub-indicator (4·85) to compute the score on 'own or collaborated innovations'.

(*iii*) *Time taken and applicability of innovation* : For applicability aspect of the innovation, a score of 2 for wider, 1 for limited applicability were given which were multiplied by the time taken for inventing each innovation in years. The total score of this aspect was multiplied by the weightage given by judges (1·30) to get the score on this item.

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(*iv*) *Nature of innovation* : An arbitrary score of 2 for basic innovation and 1 for development over the previous one was assigned and this was multiplied by the number of innovations to get the score for nature of innovation. To get the score for this sub-indicator, weightage 4 45) of judges was multiplied by the above attained score.

v) *Quality of innovations* : Against a 4-point continuum scientists were asked to rate their innovations by placing a tick mark An arbitrary scoring of 4 for excellent, 3 for good, 2 for average and 1 for poor was given which was multiplied by the weightage of judges (8 50) to get the total score on this sub-indicator.

(*b*) *Guidance to students* : Was operationalised as number and type of students guided for their thesis work by the scientist in the capacity of major and/or minor advisor. It was also attempted to rate the quality of thesis by self-judgement. The sub-indicators included are :

(i) *Number and type of students guided for thesis work by the scientist* : To measure this sub-indicator, the sum of products of number of student guided with the score given for different types of students was mult plied by the weightage of judges (7·35).

(*ii*) *Major or minor advisors* : An arbitrary scoring of 4 for the scientist who acted as major advisor and 1 for the one who acted as minor advisor (one in the committee) was given. This arbitrary score of 4 was multiplied by the number of times a scientist has acted as major advisor and the arbitrary score of one was multiplied by the number of times a scientist has acted as minor advisor. These two products were summed up which was multiplied by the weightage of judges to get the score for this sub-indicator.

(*iii*) *Quality of thesis guided by the Sctientists* : 6 attributes were identified to rate the quality of thesis based on the instructions normally sent to the external examiners to evaluate the thesis by the University, against which scientists were asked to quantify their thesis (guided by them) on 5-point continum. An arbitrary score of 4 for very good, 3 for good, 2 for average, 1 for poor and 0 for very poor was given. Total score on all the 6 attributes was taken which was multiplied by judges weightage (6·25) to get the score on "quality of thesis guided".

(*c*) *Publication behaviour* : Was operationalised as number of thesis guided by the scientist, published in a book form, fully or partly and also number of research papers, popular articles, research notes published by the scientist either singly or jointly with others at different frequencies in different types of journals. The score on this indicator is the total scores of all its sub-indicators. Sub-indicators included are :

(*i*) *Thesis published in book form* : To measure this sub-indicator, number of thesis published of his student or his own in a book form was multiplied by the judges' weightage (4·75).

(*ii*) *Publication pattern of thesis* : Three types of patterns-completely published, partly published, unpublished have been identified, the operational definitions of which are given on the next page :

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Completely published : If all the papers which could be published (yield potential) from a given thesis have been pubished, it was taken as fully or completely published.

Partly published : If only a part of the thesis is published in any form, and the other part remains unpublished, then the thesis was considered as partly published.

Unpublisped : If no part of the thesis is published, then it was considered as unpublished.

To measure this sub indicator, number given against each pattern was multiplied by the weightage given for it. The total of all patterns was considered as the score on this indicator.

(iii) Type of publications : Judges' weightage for research articles (2·80), research notes (1 475), popular articles (1·175) was multiplied by the number published, the sum of which was taken as the indicator score.

(iv) Mode of preparation of articles : 4 types, where the scientist was the sole author for the article, first or second or third authors were identified, the weightages of which were multiplied by the number published under each category. The sum of the above numbers constituted the total score for the sub-indicator "Mode of preparation of articles".

(v) Frequency of publications : Scientists were asked to give average frequency of their publications against 4 types identified. An arbitrary score of 4 for quarterly, 3 for half yearly, 2 for once in two years was given which was multiplied by judges's weightage (3 30) to get the score on this particular sub-indicator.

(vi) Type of journal : Scientists were asked to place a tick against the type of journals in which their articles were published during the productivity period. Anarbitrary scoring of 4 for the articles published in international journals, 3 for those published in national, 2 for those published in University journal and 1 for those published in journal of any other type was given, the total of which was multiplied by the experts' weightage (5·025) to compute the score on 'Type of Journal'.

(d) Research Projects completed : was operationalised as the number of Scientist's own or group research projects along with the quality of thesis completed within the prescribed time. The score on this item was the total score of all its sub-indicators. The sub-indicators are :

(i) Number of Research projects completed : was measured by multiplying the number of research projects completed with the weightage given by judges for that particular sub-indicator (6 85).

Research Project is an area of investigation with specific objectives, which terminates when its specified set of objectives have been achieved.

(ii) Completion of project within prescribed time : Scientists were asked to say 'yes' or 'no' to the question on whether the project was completed within the prescribed time, a score of 2, otherwise 0 (judges' weightages) were given which was considered as the score for this sub-indicator

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(*iii*) *Single or group project :* Scientists were asked to say 'yes' or 'no' to the question on whether the project completed was a single project or group project. If the project completed was single, a score of 5·15 (judges' weightage) was given. Otherwise this sub-indicator received a score of 0.

(*iv*) *Quality of the Research Project* Scientist were asked to judge the quality of their research projects completed according to 10 guidelines given by Devred in the book, "Organisation and Administration of Agricultural Research" by Arnon (1968). The guidelines are :

1. Availability of scientific manpower : Scientists were asked to tick mark against any one type of response which was most appropriate for their project out of 3 A score of one for, "no, had to be trained or imported", three for "no, but could easily be recruited", five for "yes" were given.

2. Availability of technical assistance : Scientists were asked to say, yes or no, and scores of 3 for 'no' and 5 for 'yes' were given.

3. Need for additional equipment : Like the above guideline, scientists were asked to say, 'yes' or 'no' and scores of 3 for 'yes' and 5 for 'no' were given to compute the score for this guideline.

4. Cost of research until completion : Respondents were requested to tick mark against 5 types of responses given which received the scores as 1 for very high i.e., more than 1 5 lakhs, 2 for more than one lakh to 1 5 lakhs rupees, 3 for between Rs. 50,000 and one lakh, 4 for between 10,000 and 50,000, 5 for less than Rs 10,000/-.

5. Compatability with overall policy directives : Depending upon the type of responses, the scientists had given a score of 1 for "implications not clear", 2 for "useful but not within priorities", 3 for "important but not within priorities", 5 for "in full accord" were given to calculate the score for this particular guideline.

6. Appropriateness of timing : Scientists were asked to give their responses on two point continuum. If the project had been completed before the problem had become absolate, a score of 5, otherwise a score of 1 was given.

7. Probability or extent of success : If the extent of success as judged by the scientists was very low, a score of one ; for low, a score of two ; for average, a score of 3; for high, a score of 4; for very high, a score of 5 were given.

8. Effect on economy : Scientists were asked to judge the effect of research on economy on 5-point continuum. A score of one for very low effect, 2 for low effect, 3 for average effect, 4 for high effect and 5 for very high effect were given.

9. Ease of adoption by farmers : Scientists were asked to say how far it is possible to convince farmers to adopt the results of research on 5-point continuum. A score of one for very difficult, two for difficult, 3 for average, 4 for easy and 5 for very easy were given.

10. Length and cost of adoption by farmers : If the length and cost of adoption by farmers was very large and very expensive, a score of 1 ; long and expensive, a score of 2 ; average. a score of 3 ; short and not costly, a core of 4 ; very short and not very costly, a score of 5 were given.

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All the scores on the above 10 guidelines were summed and then multiplied by the judges's weightage (9·00) to give the score for the sub-indicator, "quality of research projects".

After getting the research productivity scores of total respondents, they were divided into 3 categories based on mean and standard deviation as follows :

1.	Highly productive scientists	Mean + ½ SD and above	.. Score of 822·317 and above
2.	Average productive scientists	Mean ± ½ SD	.. Score of 166·976 – 832·316
3.	Less productive scientists	Mean – ½ SD and below	.. Score of 166·975 and below

3. **Extension Productivity**

Extension productivity of a scientist was computed by adding the scores of all extension activities which he has performed during the span of productivity period.

For this variable, experts have identified 6 major indicators. They are :

(a) **Training Productivity.** Training productivity was operationalised as the number of training programmes arranged/conducted alongwith the duration of each training programme by the scientist as Course Co-ordinator, or one among Course Co-ordinators team, or trainer for different number and type of personnel. It also included the number of training materials and aids developed by the scientist. The score on this indicator was obtained by taking the sum of scores of its sub-indicators. Sub-indicators included are :

(*i*, *Number and type of personnel trained* : 100 farmers as one unit, 30 VLWs as one unit, 30 B. D.Os as one unit were taken and summed up to get total units. These total units were multiplied by the weightage given by Judges (9·00) to get the score on this sub-indicator.

(*ii*) *Number of training programmes arranged/conducted* : Number of training programmes arranged or conducted by the scientist was multiplied by the weightage given by judges (5.6)

(*iii*) *Duration of training programmes* : Each week of training programmes arranged by scientist was taken as one unit and the total units were multiplied by judges' weightage (3.75).

(*iv*) *Scientists' participation in training programmes* : was operationalised as the nature of a scientist's participation in training programmes. An arbitrary scoring of 3 for the scientist who was course-coordinator for the training programme, 2 for the one who was one among course coordinators team and 1 for the one who was simply a trainer was given and this was multiplied by number of times he acted. The product obtained was again multiplied by judges' weightage (4·10) to get the score of scientists' participation in training programmes.

(v) *Training materials and aids developed* : Depending upon the type of training materials/aids developed by the scientist. an arbitrary score of 1 for posters, charts, flannelgraphs, transparencies ; 2 for slides film trips, films; 3 for models was given and this was multiplied by their respective numbers. The product obtained as a result of this was

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multiplied with judges' weightage (4 8?) which resulted in the score for 'training materials and aids developed' by the scientist.

(b) Output Through Extension Literature : was operationalised as the number and type of extension literature published by the scientist either singly or in association with others along with the frequency of publication. This indicator is the output sum of scores of all its sub-indicators. The sub-indicators are :

(i) Number of extension publications : Against the type of literature published by the scientist, they were asked to give the number, under the columns singly or in association with others. An arbitrary scoring of 2 for single publication and 1 for joint publication was given. The number of publications was multiplied by the above arbitrary scores whichever was applicable. The total of the same was subjected to multiplication with the judges weightage (4·5).

(ii) Type of publications : Irrespective of the number, an arbitrary score of 1 for folders, leaflets, 2 for news stories, news letters, 3 for bulletins, booklets published by scientist was given, the total of which was multiplied by judges' weightage (3·5) to get the score on this indicator.

(iii) Frequency of publications. Scientists were asked to give average frequency of the publication of their extension literature against 4 types identified. An arbitrary score of 4 for quarterly, 3 for half yearly, 2 for once in an year, 1 for once in two years was given which was multiplied by judges' weightage (2·9) to get the score on this item.

(c) Information Services : was operationalised as the number of broadcasts, telecasts with duration to a scientist's credit and also the number of exhibitions and film-shows arranged by him during the span of productivity period. The total score of the above items comprises the score on "information services". The sub-indicators included are :

(i) Number of broadcasts : Every 10 minutes of total duration was given unit weightage which were multiplied by number of broadcasts to a scientist's credit. The resultant product was again multiplied with judges' weightage 2·95) to obtain the score of this particular sub-indicator.

(ii) Number of telecasts : Like the earlier indicator, every 10 minutes of total duration was given unit weightage. The total units were multiplied by the number of telecasts to a scientist's credit. To obtain the score for this sub-indicator, judges's weightage (2·95) was multiplied with the total figure obtained in the earlier step.

(iii) Number of exhibitions organised : To calculate the score which this indicator has received, the actual number of exhibitions arranged by the scientist was multiplied by judges' weightage (3 10)

(iv) Number of Filmshows organised : The actual number of filmshows organised by the scientist for different audience was multiplied by the weightage given by experts (1·85) which resulted in the score for the sub-indicator, "number of film-shows organised"

(d) Farm Advisory Services : was operationalised as number of times a scientist has communicated different innovations to a group of people and also his involment in postal correspondence to number of farmers. The total score of all its subindicators constituted the score of this particular indicator, "farm advisory services". The Sub-indicators included are :

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(*i*) *Number of farmers advised* : Every 100 farmers advised by the scientist on agricultural technonogy was given a unit score of one, the total of which was multiplied by judges' weightage (6·00) to calculate the score of scientist on "number of farmers advised.

(*ii*) *Number of innovations communicated* : Every 10 innovations communicated by the scientist was given a score of one. The total units received by the scientist was subjected to multiplication with judges' weightage (5·85) to calculate the score received for the particular sub-indicator.

(*iii*) *Number of times a scientist is engaged in advisory activities* : Every 10 times a scientist was engaged in advisory activities, a score of one was given, the total of which was multiplied by judge's weightage (4·65) to calculate the score of the scientist.

(*iv*) *Scientists' involvement in correspondence courses* : Every 100 farmers educated by the scientist through postal correspondence was given unit weightage. Likewise every 10 times a scientist was engaged in advising farmers through postal correspondence was given unit weightage. The product of these to unit weightages was multiplied by judges weighatage (3·35) to score this sub-indicator.

(e) **Adaptive trials and demonstrations**—was operationalised as the number of adaptive trails, demonstrations and field trips, Kisan melas, group discussions undertaken by the Extension specialist during the productivity period. Scores of sub-indicators were summed up to calculate the score on this indicator. The sub-indicators included are :

(*i*) *Number of demonstrations laid down by Extension scientist* : Judges' weightage given to this particular sub-indicator (5·75) multiplied by the total unit weightages received after giving unit weightage to very 10 demonstrations laid down by the scientist.

(*ii*) *Number of field trails conducted* : Every 10 field trails conducted by the scientist were given unit weightage, the total of which was multiplied by judes' weightage (4·55) to calculate the score on this indicator.

(*iii*) *Number of field trips and other activities undertaken by a scientist* : For every 50 activities performed by the scientist, an arbitrary score of one was given. Depending upon the total number of activities performed, total units were calculated to multiplication with mean weightage given by judges (4·85).

(f) **Communication and Management skills of the Scientist**—was operationalised as the level of confidence of the scientists on the skills performed by them in the areas of communication and management. Score on this indicator was the sum of scores a scientist has received for its sub-indicators. Sub-indicators are :

(*i*) *Communication skills of Scientist* : Every scientist was asked to rate himself on 5-point continum with respect to his confidence about the skills possessed by him in the area of communication. An arbitrary scoring of 5 for every good, 4 for poor and 1 for very poor was given which was multiplied by judges weightage (8 00) to score this indicator.

(*ii*) *Management skills of a scientist* : Like the above sub-indicator, all the scientist were asked to rate themselves on 5-point continuum with respect to their confidence about the skills possessed by them in the area of management. An arbitrary scoring of 5 for very good, 4 for good, 3 for average, 2 for poor and 1 for very poor was given, which

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was subjected to multiplication with judges' weightage (8·00) which resulted in the score for the indicator, "Management Skills of Scientist".

After calculating Extension productivity score, of all the scientists, they were divided into 3 categories based on Mean and Standard Deviation. The categories are :

1.	Highly productive scientists	M + ½ SD & above	... Score of 999·802 and above.
2.	Average productive scientists	M ± ½ SD	... Scores of 60·106 to 999·802
3.	Less productive scientists	M − ½ SD & below	... Score of 60·106 and below

Scientific Productivity

Scientific productivity was operationally defined as the sum of productivity of scientists (teachers, researchers and extension workers) in the areas of teaching, research and extension in a span of 5 years i.e., from May 1979 to May, 1984.

The Scientific productivity score was measured by adding the scores of scientists' productivity of teaching, research and extension which was obtained by self-rating of their performance in the span of productivity period which is for 5 years.

After obtaining the Scientific productivity score, scientist were divided into 3 categories based on Mean and Standard Deviation as follows :

1.	Highly productive scientists	Mean + ½ SD & above	Score of 2611 815 and above.
2.	Medium productive scientists	Mean ± ½ SD	Scores of 798·56-2611·814
3.	Less productive scientists	Mean − ½ SD & below	Score of 798·559 and below

Limitations and Applicability of the Measurement :

As pointed out earlier, this measurement was validated for finding out the Scientfic Productivity of Agricultural Scientists. It is recommended that the validity and reliability of the measurement could be tested by the researchers when applying the measurement to measure the Teaching to general universities. Besides depending upon the role expectations of the scientists in any organisation or university, necessary modifications could be affected in the indicators. Further, the maximum and minium parameters of productivity could be set by the researcher using this measurement in a particular situation. We welcome the researchers who would like to further standardise the instrument so that it can be used for evaluating the performance standards of the scientists. For more detailed examination and use of the measurement, the details of questionnaire as described in the foregoing pages could be used. The questionnaire if administered to the Scientists and scored as the norms suggested, one can quantify the Scientific Productivity of Scientist. However, certain qualitative dimensions could be evaluated through superiors, subordinates and clientele. This will further enhance the quality of the measurement.

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QUESTIONNAIRE TO MEASURE SCIENTIFIC PRODUCTIVITY
(TEACHING, RESEARCH AND EXTENSION PRODUCTIVITY)

INTRODUCTION

1. The questionnaire consists of number of structured and unstructured questions as well as score card for measuring your SCIENTIFIC PRODUCTIVITY IN THE AREA OF TEACHING, RESEARCH AND EXTENSION.
2. Please note that we are trying to measure scientific productivity in terms of teaching, research and extension in a SPAN OF FIVE YEARS. Therefore you are requested to highlight your achievements and the routine activities undertaken by you right from MAY 1980 TO MAY 1984 (5 YEARS).
3. For some of the questions of course you are requested to furnish the data pertaining to your entire service. Please read the instructions before answering each question.
4. You please read all items structured and unstructured in all the three areas which will facilitate you to answer atleast some items in other areas, since we have furnished the questions which you can possibly answer in other areas also.
5. Even if you have not served as a teacher during the last five years of during your career, I request you to fill in the score card for judging your teaching efficiency as a lecturer or trainer.
6. It could be administered for the most recent span of time of 5 years.

33. TEACHING

Please answer the following questions :

a) **No. of students taught by you since 5 years :**

i) No, and type of students taught by you during the last 5 years

Type of students	No.
Undergraduates . .	
Postgraduates . .	
Doctorates . .	

ii) No. of courses taken by you for the last 5 years :

One	( )
Two to Four	( )
Five to Seven	( )
Eight to Ten	( )
Eleven and above	( )

iii) No. of courses taught to different types of students from the past 5 years :

Type of students	No.
Undergraduates . .	
Postgraduates . .	
Doctorates . .	

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iv) How many times you have taken a particular course

Sl. No.	Name of the Course	Credit hrs.	No. of times

v. What is the average number of credit hours utilised by you in one semester.

	Credit hours
Theory	. .
Practicals	. .

vi. If you can recollect, please mention how many students have obtained (A) grades in the courses taught by you since last 5 years (Please give approximate number).

	Number awarded 'A' grades
Undergraduate students	. .
Postgraduate students	. .
Doctorate students	. .

b) **Additional Teaching Activities :**

i. How many times you have given Talks/Seminars in addition to your regular activities (since last 5 years)

	Name of the Dept / Inst / Conference	No. of times
In the same Department	. .	
In other departments of APAU	. .	
In other Colleges of APAU	. .	
In some other organisation/institution	. .	
In Conferences/Seminars/Workshops	. .	

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ii. Quality and presentation of the paper to be judged by the scientist.

It you have presented any paper in the conference/seminar for last 5 years, please give the following details.

Name of the Conference/Seminar	Title of the paper

Note : If necessary answer in the enclosed sheet

iii. Please give the average ratings of your papers based on the following criteria by placing tick mark (√) in the appropriate column.

	Good	Average	Poor
1. Importance and timeliness of the subject			
2. The logical approach to the subject			
3. The clarity of the presentation			
4. Accuracy of the presentation			
5. Clarity and accuracy of conclusions drawn			
6. Scientific and/or practical contribution			
7. The technical excellence of the paper			
8. Contribution to innovation in experimental procedure			

c) **No of times a teacher acted as an expert member/examiner outside University (Furnish the date for the last 5 years) :**

	No. of times
i) For how many interviews you were the Chairman	
Member	
Expert	

ii) How many thesis were evaluated by you as an external examiner :

No.	M. Sc.	Ph. D.
None		
1-5		
6-10		
11-15		
16 & above		

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iii) How many times you acted as an examiner for :

	M. Sc,	Ph. D.
a) Thesis viva	..	
b) Comprehensive	..	

iv) Did you set question papers any time (last 5 years only) for the students of your University ?

Yes/No

If yes, give the following details :

Type of students for whom you acted as question paper setter	No. of times you acted as question paper setter
B. Sc. ..	
M. Sc. ..	
Ph. D. ..	
Any others (specify) ..	

v) Did you set question papers for the students outside your University ? (for the last 5 years only)

Yes/No

If yes, furnish the follwing details :

Sl. No.	Type of students	No. of times	Title/Name of the Subject/Course

vi) How many times you evaluated answer scripts of the students of your University/other Universities. (for the last 5 years)

No of times	Own University	Other University
Nil ..		
One-three ..		
Four-six ..		
Seven-nine ..		
Ten and above ..		

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vii. How many students' papers you have evaluated for the past 5 years :

Type of Students	No.	Percentage of people (students) passed out
B. Sc.		
M. Sc.		
Ph. D.		
Any others (specify)		

d) **Books Published :**

i. Give the number of books you have published :

(Answer this question pertaining to your entire experience/career)

Nil

One

two

three

four

five and above

ii. How many of them are published since last 5 years :

a)

b)

c)

d)

iii. Write the name (s) of the book (s) with publisher's details.

Name of the Book	Publisher's details	Cost

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iv. State your authorship for the published books

Sl. No.	Single author	First author	Second author	Third author

v. No. of Editions of books brought out : (entire career)
one / two / three / four / five and above

vi. Indicate to whom the book is intended for : (tick the appropriate column)

Undergraduates	( )
Postgraduates	( )
Doctorates	( )
All the three	( )
Any others (specify)	( )

vii. How do you rate the quality of the book :
Good / Average / Poor

viii. State whether the book is reviewed by any expert : Yes / No

If yes, please indicate the following details :

Name of the reviewer	Journal/paper in which it is published

e) **Output as an advisor :**

Please furnish the following details related to your output as an advisor for the past 5 years:

As you are aware, in this University, some undergraduate students are assigned to a teacher for advisory work.

i. Give the number of students for whom you acted as an advisor from the pass five years :

a) 11 – 20
b) 21 – 30
c) 31 – 40
d) 41 – 50
e) 51 and above

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ii. Did you participate in co-curricular activities : (Furnish this data pertaining to your entire service).

If yes, please give the following details : Yes/No.

	No. of times participated	Nature of the activities undertaken
N S S		
N C C		
Literary competitions		
Any other (specify)		

iii. Did you participate in RAWE Programme (entire service)

If yes, please mention the following details : Yes/No

Name of the Course taught	Credit hours	No. of students	Type of activities

f) **Teaching Efficiency :**

SCORE CARD

This is the score card for judging the teaching efficiency of a lecturer. This score card has three main items which are again sub-divided into various sub-items. Against each item the maximum possible score a person can score is given. Under the column 'Actual Score', against each item, you please give the score which you think you get (Self rating). Please feel free to give the realistic scores.

	Possible Score	Actual Score
I. PERSONAL (25)		
a) Appearance	5	
b) Friendly conversational approach	5	
c) Poise, confidence and enthusiasm	5	
d) Gestures, mannerisms, eye contact and humour	5	
e) Voice, delivery, style, fluency and pronunciation	5	

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ii. PRESENTATION (35)

a)	Introduction and objectives	5	—
b)	Treatment, highlights, key points and examples	10	—
c)	Teaching aids carefully selected, arranged and used	5	—
d)	Summary and conclusion	5	—
e)	Questions and answers	5	—
f)	Maintaining interest	5	—

iii. SUBJECT MATTER (40)

a)	Related to field situation	5	—
b)	Adequacy	10	—
c)	Systematic break-up	7	—
d)	Balanced coverage	6	—
e)	Problems well brought out and covered	7	—
f)	Latest information	5	—
	Total	100	

34. RESEARCH PRODUCTIVITY

Please answer the following questions :

a) Innovations for your credit (This item you can answer taking the total years of your experience/career) :

i. How many number of innovations were there for your credit.

	Own	In Collaboration with others
Zero		
One		
Two		
Three		
Four		
Five & above		

ii. Write the following :

Name of the innovation	No. of years taken for inventing an innovation	Applicability	
		Wider	Limited

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iii. How many of the above said innovations were invented in the last 5 years :

One/two/three/four/five &above

iv. If the innovation is in collaboration with other, give the No. of persons collaborated with you ?

One	( )
Two	( )
Three	( )
Four	( )
Five and above	( )

v. State the nature of your innovation/innovations

Basic	( )
Development over the previous one	( )

vi. How do you judge the quality of your innovation/innovations :

Excellent/Good/Average/Poor

b) **Guidance to Students :**

i) Give the No. and type of students guided by you and the capacity in which you have acted as an advisor ? (Since 5 years)

Type of students	Total No	Major Advisor	Minor Advisor
M. Sc.			
Ph. D.			

ii) Please give average rating of the theses guided by you on 5-point rating scale with the following attributes ?

	Very good	Good	Average	Poor	Very poor
Appropriateness of the problem.					
Methodology followed					
Presentation of the theses					
Applicability of findings					
Illustrations and tables					
Contribution to the field					

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c) **Publication Behaviour**

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I. How many of your student's theses are published in some professional journals Give the number) : (Furnish the data for the last 5 years)

1—5	( )
6—10	( )
11—15	( )
16 & above	( )

ii. Give the publication pattern of the theses :

S. No.	Published Theses		Unpublished theses
	Partly published (Number)	Completely published (Number)	(Number)

iii. How many of your students theses have been published in a book form (Furnish the data for your entire service).

One	( )
two	( )
three	( )
four	( )
five and above	( )

iv. Publication pattern of research articles, notes etc. Furnish this data for the last 5 years (Please tick in the appropriate column)

Type of Publications	No.	Singly	First Author	Second Author	Third Author
Individual Res. papers	..				
Research papers (projects)	..				
Research papers (Theses)	..				
Popular articles	..				
Research notes	..				
Others (Specify)	..				

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v. What is the average frequency of yours publications :

Quarterly	( )
Half-yearly	( )
Once in an year	( )
Twice in an year	( )
Any others (specify)	( )

vi. Give the type of Journal in which they are published :

a)	International	( )
b)	National	( )
c)	University Journal	( )
d)	Journal of any other type	( )

vii. Please furnish the following details regarding your publications (Give the details for the last 5 years).

Name of the Article	Name of Journal	Year of Publication

Note : If the space is not enough, please append the matter at the end.

d) **Research Projects Completed**

i. Number of research projects completed for your credit. (since 5 years)

One	( )		
Two	( )	Four	( )
Three	( )	Five and above	( )

ii. Is the project completed within the prescribed time ? Yes/No

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iii. Is it a single project or group project ? Single / Group

If it is group project, were you the group leader or an associated member and how many times you were so.

	No of times
Project leader	..
Associated Member	..
Any others (specify)	..

iv. State whether the project is in collaboration with.

	Project leader	Associated Member
Local organisation	..	
National organisation	..	
International organisation	..	
Any other organisation	..	

v. Quality of the research project ; Please judge the quality of the research project according to the guidelines given below :

1. Was scientific manpower already available ?

   No, had to be trained or imported
   No, but could easily be recruited
   Yes

2. Was technical support already available ?

   No Yes

3. Was additional equipment necessary (required) ;

   Yes (from inexpensive to expensive)
   No

4. Cost of research until completion ;

   Very high
   More than 1 lakh
   Between 50,000 and 1 lakh
   Between 10,000 and 50,000
   Less than 10,000

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5. What is the degree to which the research was compatible with the directives determined by the programme policy ?

Implications not clear

Useful but not within priorities

Important but not within priorities

In full accord

6. Contribution of project to a balanced programme :

No ( )

Yes in different degrees ( )

7. Research completed before the problem had become obsolete :

Yes/No

8. Extent of success ;

Very low/Low/Average/High/Very high

9. Effect on economy :

Very low/Low/Average/High/Very high

10. Difficulty to convince farmers to adopt the results of research ;

Very difficult/Difficult/Average/Easy/Very easy

11. Length of the process to adopt the results into agricultural practice :

Very long and very expensive/Long and expensive/Average/ Short and not costly/Very short and not very costly.

35. EXTENSION PRODUCTIVITY

Please answer the following questions :

a) **Training Productivity :**

1. Give the type and number of personnel trained by you (since last 5 years)

Sl. No.	Type of personnel trained	No.
1.	Farmers	..
2.	SMSs	..
3.	VLEs	..
4.	BDOs	..
5.	Others (specify)	..

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ii. Give the total number of training programme you have arranged or you are one among the trainers and also the duration of each training programme (since last 5 years)

No. of training programmes	Duration

iii. Give the number of training programmes for which you are the Course Coordinator/ one of the Course Coordinator's team/simply trainer (Furnish this data for last 5 yrs.)

	No of times
Course Coordinator	..
One among Course Coordinators team	..
Trainer	..

iv. Mention some of of the training materials/aids developed by you (since last 5 years)

Training Materials	No.
Posters	..
Charts	..
Flannelgraphs	..
Slides	..
Filmstrips	..
Films	..
Transparencies	..
Models	..
Any others (specify)	..

b) **Output through Extension Literature**

i. Give the publication pattern of your extension literature : (since 5 years)

Type of publication	Singly	In association with other
Folders		
Leaflets		
Booklets		
Bulletins		
News stories		
News letters		
Any others (specify) :		

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ii. What is the average frequency of publishing the extension literature by you :

Quarterly	( )	Twice in an year	( )
Half-Yearly	( )	Any others (spcecify)	( )
Once in an year	( )		

c) **Information Services**

i. How many farm broadcasts and telecasts are there for your credit. (Furnish this data for last 5 years only)

Type	No.	Total duration (approx.)
Broadcasts		
Telecasts		

ii. What is the frequency of giving programme ;

	Broadcasts	Telecasts
Weekly	..	
Monthly	..	
Quarterly	..	
Half-yearly	..	
Once in an year	..	
Twice in an year	..	

iii. Give the following details ; (Since last 5 years)

No. of exhibitions arranged	..
No. of film shows organised	..
No. of field trips conducted	..
Group meeting	..
Kisan melas,	..
Farm and home visits	..
Office calls	..
Any others (specify)	..

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d) Farm Advisory Services ; (Furnish this data for last 5 years)

i. Give the average number of farmers advised by you on latest agricultural technology_____

ii. How many innovations are communicated by you_____

iii. How many number of times you are engaged in advisory activities_____

iv. How many times you have educated farmers through postal correspondence_____

v. Give the number of farmers educated_____

e) Adaptive Trials and Demonstrations ; (Since last 5 years)

Give the type and number of trials and demonstrations conducted ;

Type	No.
Adaptive trials	..
Demonstrations	..
Field trials	..
Minikit trials	..
Any others (specify)	..

f) Communication and Management Skills of the extension worker ;

Please rate yourself with respect to your confidence about the skills possed by you in the following areas.

Management Skills	Very Good/Good/Average/Poor/Very Poor
Communication Skills	Very good/Good/Average/Poor/Very poor

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PART—D

PROBLEMS AND SUGGESTIONS

i. What are the problems you think which hamper your productivity ;

as a teacher	as a researcher	as an extension worker
a)		
b)		
c)		
d)		
e)		

2) What suggestions can you make to improve your productivity.

as a teacher	as a researcher	as an extension worker
a)		
b)		
c)		
d)		
e)		

OPERATIONAL DEFINITIONS

Scientific Productivity : The work outcome of an individual as a teacher, reseharcer an extension worker in a span of 5 years.

Innovation ; Any thing new which is invented by you e.g.. a variety of seed, a scale developed by you, a new farm implement etc.

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Motive to Avoid and Approach Success : Two Dimensions of The Same Motive

Satvir Singh and Jaskaran Kaur[1]
Guru Nanak Dev University, Amritsar

Thematic Apperception Test was administered, alongwith measures of personalitity, sex role, work values and locus of control to 200 (100 *males,* 100 *females) undergraduate students. The results indicated that motive to approach success and motive to avoid success are the opposite poles of the same dimension rather than independent personality dimension, a conception at variance with much current thinking. Furthermore, there were some indication that n-Achievement in association with economic interest and perference for activity rather than being idle tend to promote achievement oriented behavior whereas n-Ach in association with personality factors such a tendermindedness, anxiety, depression and guilt proneness tends to promote motive to avoid success.*

Since the publication of the Achievement Motive (McClelland *et al.*,1 953), there has been extensive research to understand the contemporaneous determinants of achievement oriented behaviour (Atkinson, 1964 ; McClelland, 1961 : Heckhausen, 1967). But relatively little progress has been made to resolve sex-differences (Veroff, Wilcox and Atkinson, 1953 ; Alper & Greenberger, 1967 ; French & Lesser 1964). To explain this failure (Horner, 1968, 1972) proposed that a typical women, as a result of sex-role training has developed the belief that achievement striving are incomptible with feminity and successful achievement can be accomplished only at the price of loss of femininity and of

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social rejection. She calls this tendency to reject success the "Motive to avoid success (MS). Motive to avoid success means a disposition to become anxious about achieving success because they expect negative consequences (such as social rejection/or feeling being unfeminine) as a result of succeeding (Horner, 1972). The consequence of this desp-ostion is a tendency to avoid achievement.

One problem with the existing literature is that an attempt is made to describe the unique constellation of characteristics possessed by individuals with high motive to avoid success and achievement motivation (motive to achieve success as it is alternatively called). But there is little positive empirical evidence of the degree to which these characteristics in fact do covary. Additionally, too often either male or female subjects comprised the samples, limiting the generalizability of the results. Thus, it became imperative to do comprative studies in order to explain vexing sex-differences in achievement oriented behavior.

The present exploratory study is on attempt to clarify this issue. It includes in its purview variables, such as motive to achive and motive to avoid success, work values, achievement orientation, sex role, locus of control and personality including intelligence. The variable included in the study, were selected with reference to theoretical considerations projected by early investigators and the time involved in administering the tests.

METHOD

Two hundred (100 males, 100 famales) undergraduate students volunteerid for the study. This age of these subjects varied from 16 to 21,with a mean of 18.22 years. Each subjects completed the Eysenck Personality Questionnaire (EPQ : Eysenck & Eysenck, 1975), Neuroticism Scale Questionnaire (NSQ : Cattell and Scheier, 1961), Locus of Control Scale [Levenson, 1972], General Mental Abillty Test [Jalota, 1958], Survery of Work Values [Smith, 1975], Achievement Orientation Questionnaire [Ray 1979], and Bem Sex-role inventory Bem 1974]. Projective protocols were obtained in standard fashion [Atkinson, 1958, Appendix III]: Participants examined a written cue for 20 seconds followed by four minutes to write a story. There were four cues suggested as approprite for measuring MS [Horner, 1980; Satvir Singh and Kapur, 1982] always presented in the followiog order: [a] Sita/Mohan is sitting in a chair with a smile on her/his face; [b] After dinner, Ram/Sheela went back to his/her desk; [c] Rachna/Amar is talking to an older person about somthing important; [d] Usha/Rahul just learned that she/he received the higest scores in national examination. Same-sex cues were used with males receiving male names and females, famale names. As indicated below, the cues elicited sufficient imagery for scoring MS as will as Motive to achieve success.*

* The question of potentialy spurious effects with multiple scoring of the same stories has arisen in precious work with projecttve measures. It was concluded that multiple scoring need not produce such effects, especially when there is sufficiently high imagery present for the motive scored [See : Atkinson, 1958].

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M.S. Scoring

Motive to avoid success was scored by detecting the presence of imagery in six content categories (weights are in parentheses): Contingent negative consequences (+2); Non Contingent nagaitive consequences (+2); interpersonal engagement (+2); relief [+1]; absence of instrumental activity [+1]; absence of others in the story [−2]. Thus scors on each story could range from −2 to +8. Two raters scored all the stories with an interrater agreement [r=.92] which is well above the, .85 level recommended in the scoring manulas [Horner *et al.*, 1973. Percentage imagery for the four stories was 49, 57, 63, and 46, respectively for males and 53, 62, 71 and 45, respectively for the female subjects.

***n*-ach Scoring**

protocols were scored for motive to achieve according to the standard system by a rater [JK], who had established acceptable training reliability with expert scoring [See Atkinson, 1958, Appendix I). Scores could range from −2 to +11 for each story. Percentage imagery for the four stories was 64, 89, 76, 49, (for males) and 67, 81, 65, 57, for females, respectively.

The Reliability Conefficients of all the measures were computed by the Split-half method and Corrected by the Spearman-Brown formula. The reliability coefficients ranged from.59 to .79 (Mean rtt=.74).

RESULTS AND DISCUSSION

Sex Differences

The significance of differences between means was checked by a two-tailed t-test (df=198, in each case). Females scored higher than males on motive to avoid success (Female : M=11·42, SD=3·18 ; Male : M=10·54, SD=2·17 ; t=2·05 P <·05). Thus the results give strong support to studies cited by Horner (1972), Feather and Simon (1973), and Satvir Singh and Kapur (1982) that also yielded significant sex-differences.

Males on their part, scored higher than females, on motive to achieve success (Male : M=20·43, SD=7·06 Females: M=15·14, SD=6·78 t=5·36 ; p.>·01). The results agree with the studies of McClelland *et al.*, (1953), Atkinson and Feather (1966) who also found male scoring higher than females on *n*-Ach.

Correlates of Approach-Avoidance Motives

The basic summary of relationships observed was in the from of a zero-order product-moment correlation matrices. The main vector of interest in these matrices was of course the vector of correlations with motive to approach and avoid success. The notable finding from correlational analyses may be summarized as follows :

Motive to Avoid Success

For females, motive to avoid (MS] success correlated with extraversion (r=−·20, p>·01) external control [r=·19, p<·05], femininity [r=−·25, p<·01], and low concern

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over standard of excellence [$r=-.20$, $p>.01$] suggesting thereby that females scoring higher on MS tended to be more introvert, more externally controlled [perceived the events in their lives as being related to chance [Luck], more involved in sex role appropriate activity and low concern over standard of excellence. This portrait of a female with high MS quit aggees with the one given by Horner [1968, 1972].

In case of males, MS was found to be significantly related to anxiety [$r=.24$, $p<.05$], neuroticism [$r=.25$, $p<.01$], low economic interests [$r=-.20$, $p<.05$, believe in chance/fate ($r=.21$, $p<05$), and *n*-Ach ($r=.35$, $p<.01$). It is conceivable that low anxiety, low economic interest, neurotic trends, believe in chance/fate and low concern over standard of excellence could lead to avoidance motive in males.

Motive to Achieve Success (n-Ach)

For males, the significant correlations were with social desirability, Anx+, US and Ae+. This pattern of correlations suggests that a person scoring higher on *n*-Ach tend to be anxious ($r=.23$, $p<.05$) respond in a socially desirable way ($r=-.23$, $p<.05$), upward striver ($r=.19$, $p<.05$) and dominated by economic interests ($r=.28$, $p<.01$). This portrait of a person with high *n*-Ach fairly agrees with the one given by McClelland (1961).

For females, apart from anxiety [$r=-.19$, $p>.05$], three other correlations with approach motive were with low fatalistic approach [$r=.20$, $p<.05$], intelligence ($r=.21$, $p<.05$], and low interest in culturally defined sex-roles [$r=-.21$, $p<.35$], indicating that an achievement oriented female tend to be anxious, believe in ability and hard work rather than luck and less interested in culturally defined sex roles. Horner [1969] observation that achievement striving are incompatible with feminity is also borne out by the negative relationship between *n*-Ach scores and femininity.

Factor Analysis

The main purpose of this analysis was to locate the structural relationship among identified correlates of approach-avoidance motives.

Separate matrices of Pearson product-moment correlations were computed for males and females. Choosing an eigenvalue of 1 as the cut-off point for the number of factors to be extracted, nine factors were found to account for the bulk of Variance [male =71%, female=70%). Male and female resultant factor matrices were submitted to varimax rotation and all variables having an absolute factor loading greater than three were selected in each factor.

Significant loadings [$\pm .30$) of motive to approach and motive to avoid success appeared only on one factor in both the groups (male factor III, female factor IV), suggesting thereby that approach-avoidance motives in both males and females are simple measures (See Table-1). Further the significant positive and negative loadings respectively of motive to avoid and approach success for both the samples on the same factar suggests that they

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are opposite pole of the same dimension rather than independent personality dimensions, a conception at variance with much current thinking.

Table 1—Rotated Factor pattern-Principal Axis-Varimax Solution.

S. No.	Variable	Males	Females
1.	Psychoticism	—·04	—·21
2.	Extraversion	·04	—·31
3.	Neuroticism	·05	—·51
4.	Lie Scale	—·10	—·23
5.	Overprotection	—·10	—·32
6.	Depressiveness	·05	—·12
7.	Submissiveness	·08	—·33
8.	Anxiet y	·30	—·46
9.	Neuroticism (NSQ)	·11	—·01
10.	Social Status	—·11	—·06
11.	Activity Preference	—·00	—·00
12.	Upward striving	·13	-·03
13.	Earning attitude	·45	·15
14.	Pride in work	—·11	·11
15.	Work Involvement	·37	—·06
16.	Personal Control	—·17	—·05
17.	Powerful others	—·13	-·07
18.	Believe in chance/fate	·13	·18
19.	Masculinity	—·04	—·03
20.	Femininity	—·01	·29
21.	Intelligence	·02	—·13
22.	Value achievement	·07	—·01
23.	*n*-Ach (TAT)	·83	-·86
24.	Motive to Avoid Success (MS)	—·77	·80

To allow meaningful comparison between the factor pattern for males and females it was considered appropriate to pair the rotated factors in the two sample. This was accomplished by computing coefficients of congruence. Congruence between factor III

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of males and factor IV of females is of low order, the coefficient being 0·06. It is thus clear that these factors have not much in common. Although because of high loadings on approach-avoidance motives in both the samples, the pair was named 'Approach-Avoidance Motive".

For females, the loading pattern on this pair indicates that achievement motivation in association with personality factors such as introversion, depression, tendermindedness, submissiveness and anxiety tends to interfere with achievement oriented behaviour.

While for males, the loading of earning attitudes, involvement in work and anxiety on this factor suggests that persons scoring higher on motive to achieve success tend to be economically active, anxious and keep himself active and busy on his work.

In conclusion, a review of information provided by the comparison of means, the correlational analysis and the factor structure shows the three analysis supplement each other. It also reveals that males and females differ quantitatively as well as qualitatively on motive to approach and avoid success. Given the findings of the present study, the thrust of future research in this area should be to determine the relative power of personality characteristics, values, motives and early child-hood experiences in promoting approach-avoidance motives, rather than resolving sex-differences in achievement oriented behaviour.

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1987, Vol. 19, Number 1, Page 8—12

Resentments of Adolescents

Gurmeet M.P. Singh* & Sudeep Bhangoo**

Adloescence is marked with significant physical changes which have a direct bearing on the behaviour of an adolscent. His interests change during this period and he beging to move out of the house more frequently (Mussen, *et al*., 1974). As he attains the adults size and appearance,he prefers to be treated like an adult. He demands more autonomy and independence from the parents. Any restrictions on his behaviour and attempts at thwarting his realistic or un realistic wishes make him rebellious. He begins to resent adult authority and uses every opportunity to crticise the same (Stone and Church, 1968). The longer the adolescent remains dependent on parents the more frustrated, restless and rebellious he is likely to be (Hurlock, 1974). Mass media plays a major role in idealising the concepts of adolescent about the world. In real life, when his school or college teachers, family member and other facilities do not compare with his indealized concepts, he tries to reform every thing and any failures lead to resentment and criticism. The present study, was therefóre, an attempt to study at length the common resentments among adolescents. The following were the specific objectives of the study:

(i) to identify the common restntments of adolescents towards partents, household and college.

(ii) to determine the sex-differences in resentments of adolescents.

Methodology

An exploratory and descriptive survey was conducted on 120 randomly selected adolescents studying in various colleges in Ludhiana city. An equal number of boys and girls were selected. A self-constructed questionaire was administered to seek information regarding family background of the subjects and details of resentments regarding college hovsehold, and parental behaviour. The responses were tabulated and collected into frequencies. Percentages were worked out to identify the resentments and the sex-differencs in these resentments.

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RESULTS AND DISCUSSION

Characteristics of the Sample

The sample comprised of an equal number of male and female college students ranging between the age 18 to 21 years, representing the period of late adolesence. Most of the students came from nuclear families. The education of their parents ranged from below matric to graduation and postgraduation. 65 percent of them resided in hostels and the rest were non-hostelers. Most of them belonged to urban areas, however a few came from rural and sub-urban areas.

Resentments towards Parents, Household and College.

Many adolescents were found to resent parents, household and college to a considerable extent. Parents were resented mainly for restrictions imposed on moving about of adolescents. Table No.—1 shows that the respondents disapproved the parental restrictions going out after dark and on going for movies and pleasure trirs with friends. They also showed displeasure at too much of stress on studying and expectations about getting up early in the morning. On the whole, mothers were resented more than fathers. Fathers were resented significantly more than mothers for help expected in the household. The subjects also showed anger at parents if they read their personal letters. Restrictions on use of vehicles, ways of dressing up and participation in extra-curricular activities were among the other areas criticised by the adolescents.

The adolescent's opinions regarding what they resented in their household were also sought. They were found to be most indignant at interference by relative in their personal lives (Table No.2). Lack of separate room or almirah for themselves were also disliked by subjects. The above findings suggest that the modern youth desire more privacy and freedom than what they have or what their parents are willing to give them. They were also found to be unhappy with the amount of their pocket money and insufficient modern facilities in their house.

About college, the adolescents were most critical about favouritism by teachers (Table No. 3). Since the sample was drawn from universities where either there is internal system of evaluation or atleast 20 percent of the total marks are based on internal assessment, the students may be getting the feeling that teachers have a scope for being partial. Poor canteen facilities at college were deplored by three-fourth of sample. Rules and regulations method of evaluation, high frequency of examination and poor library facilities were also resented by the students.

Sex-differences in Resentments

Significant differences were observed in resentments of boys and girls in many aspects of parental behaviour, household and college. A conspicously high number of boys disliked lack of contacts of the family with people of political influence, whereas, none of the girls mentioned this item (Table No. 2). More boys than girls

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Table No. 1; Resentments amongst adolescents towards parental expectations and behaviour.

Sr. No.	Resentment	Father			Mother		
		Male [n==60]	Female [n+60	Total [N+120]	Male [n ⌈ 60]	Female [n+60]	Total [N—120]
1.	Restriction on going out after dark.	48[80]	51[85]	99(82·5)	42(70)	49(81·7)	91[75·8]
2.	Restriction on going out for movies with friends.	32[53·3]	42[70]	74[61·7]	39[65]	52[86·7)	91[75·8]
3.	Expectations regarding getting up early in the morning.	42(70]	44[73·3]	86[71·7]	40(66·7]	43[71·7]	83[69·2]
4.	Stress on studying most of the time.	48[80]	35[58·3]	83[69·2]	39[65]	34[56·7]	60[50]
5.	Restriction on going for pleasure trips, picnics, etc.	21[35]	34[56·7]	55(45·8]	29[48·3]	31[51.7]	60[50]
6.	Reading letters received from personal friends.	44(73·3]	18[30)	52[43·3]	32[53.3]	24[40]	56[46·7]
7.	Restriction on using vehicles such as scooter, mobike.	36[60]	11[18·3]	47[39·2]	33[55]	19[31·7]	52[43·3]
8.	Negative comments about way of dressing up.	31[51·7]	29[48·3]	60[50]	25[41·7]	26[43·3]	51[42·5]
9.	Restriction on participation in extracurricular activities.	23[28·3)	13[21·7]	36[30]	30[50]	15[25]	45 37·5]
10.	Negative comments on reading books other than Text books.	29[48·3]	28[46.7]	57[47·5]	21[35]	22[36·7]	43[35·8]
11.	Looking up personal almirch in the absence of adolescent.	23[28·3]	19[31·7]	42[35]	17[28·3]	13[21·7]	30[25]
12.	Not allowing to mix with members of opposite sex.	35[58·3]	16[26·7]	51[42·5]	11[18·3]	15[25]	26[21·7]
13.	Negative comments about friends.	23[28·3]	29[48·3]	52[43·3]	17[28·3]	14[23·3]	21[17·5]
14.	Expectations regarding help in household.	47[78·3]	39[65]	86[71·7]	44[73·3]	27[45]	21[17·5]
15.	Restriction on choice of subjects for higher studies.	[27]45	16[26·7]	43[35·8]	10[16·7]	71[1·7]	17[14·2]

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disapproved the lack of separate almirah, vehicle of their choice and the amount of their pocket money. Boys also showed more displeasure at the usual menu in the house and the quality of food preparation. Boys are the preferred and the privileged class in our society. It may be because of this reason that they are more resentfnl about whatever they dislike in the household, whereas, girls show more of patience.

Table No. 2 : Resentments amongst youth regarding their household.

Sr. No.	Resentment	Male (n=60)	Famale (n=60)	Total (n=120)
1.	Interference by relatives in personal life	37(61·7)	44(73·3)	81(67·5)
2.	Lack of Separate Almirah	46(76·7)	33(55)	79(65·8)
3.	Lack of Separate room.	39(65)	36(60)	75(62·5)
4.	Amount of Pocket money.	41(68·3)	25(41·7)	65(55·0)
5.	Lack of modern facilities in the house.	23(38·3)	23(38·3)	46(38·3)
6.	Lack of vehicle of personal choice	28(46·7)	16(26·7)	44(36·7)
7,	Lack of contacts of family with people of political influence.	40(66.7)		40(33·3)
8.	Total space of the House.	22[36·7]	16[26·7]	38(31·7)
9.	Hours of meals.	20[33·3]	10[16·7]	30(25·0]
10.	Quality of food preparation	22(36·7)	8[13·3]	30[25·0]
11.	Menu of food.	16[26·7]	11(18·3]	27[22·5]
12.	Colony where the house is situated.	13[21·7]	13(21·7]	27[21·7]

[i] figures in parentheses Show percentages.

[ii] Percentages do not total up to 100 due to muliple responses.

Boys were more critical of poor canteen facilities, rules and regulations, lack of teaching aids, and big number of students in classes. However, more girls than boys resented favouritism by teachers (Table No.3). They also disregarded restrictions on going out for movies, picnics, etc. and negative comments about friends more frequently than boys. Boys disliked stress on studying, help expected in the household and restriction on mixing with girls. Reading of personal letters by fathers or mothers was disapproved by boys more often than girls.

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Conclusion

Interference by relatives, favouriism by teachers and restrictions on moving about were ths situations that the adolescents resented the most. Boys were found to be more resentful in all the areas than girls. It may be concluded that boys demand more of privacy and privileges than girls.

Table No. 3 : Resentments amongst adolescents regarding College.

Sr. No.	Resentments	Male [N=60]	Female (N=60)	Total (N=120)
1.	Favouritism by teachers	47(78·3)	56[93·3]	103[85·8]
2.	Rules and regulations	53[88·3]	36[60]	89[74·2]
3.	Poor centeen facilities.	53[88·3]	35(58·3]	88[73·3]
4.	Method of evaluation.	42[70]	43[71·7]	85[70·8]
5.	High frequency of examination.	41[68·3]	43[71·7]	84[70]
6.	Insufficient library	34[56·7]	22[36·7]	56[70]
7.	Too mnch of theoretical knowledge.	31(51·7)	23(38·3)	54(45)
8.	Lack of teaching aids	49(81·7)	28(46·7)	54(45)
9.	Large number of students in the class.	32(53·3)	16(26·7)	48(40)
10.	Lack of extra-curricular activities.	23(38·3)	20(33·3)	43(35·8)
11.	Lack of proper class room.	12(20)	22(36·7)	34(28·3)
12.	Uniform in the college.	17(28·3)	8(13·3)	25(20·8)
13.	Assembly in the morning.	17(28·3)	6(10)	23(19·2)

(i) figures in parenthesc show percentages.

(ii) Percentages do not total upto 100 due to multiple responses.

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A Study of Secondary School Teachers' Involvement in Activities in the Schools

Shirish T. Kapadia

The underlying concept of different definitions of the world 'Education' points out that it is an attempt on the part of the adult member of the society to shape the development of the young generation according to their own ideals of life. The above concept very clearly points out that Education includes deliberate direction and training. For this, the responsibility rests with the community to provide the young the best opportunities of self-development.

It is also accepted that school is an agency of Education and its responsibility is to continue, supplement and very often to correct the influences of family life. To perform this function a school has to be agenuine society.

But in most of our schools a teacher, taking children to be the storehouse of information, simply transmits information like a high-priest delivering sermons in a church or a chapel. This is because a teacher in our educational set up thinks that his duty to finish the course in the subject assigned to him, A sad note is that a trained teacher who very well differentiated a curriculums and a syllabus when he underwent a graduation or post-graduate course in Education things of the courses of study-snbjects taken by a pupil as the curriculum. A functional concept of curriculum is the utilization of experiences to achieve the aims of education.

Educationists world-over have emphasised the importance of curricular and co-curricular activities saying that without giving experiences to a child by involving him in different activities the aim of all round devolpment of a child can never be achieved. In our schools the idea of apportioning time for the co-curricular and extra-curricular activities did gain currency the last two decades and these activities were a matter of pride for our progressive schools.

No educator or educationist or even a vigilent citizen as our country to-day denies the importance of co-curricular and extra-curricular activities in our school curriculum, and nobody feels that importance of these activities in our schools in the present

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day structure of our society can be over-emphasised. But the head teachers of Secondary schools in Gujarat are very often heard saying that the Secondary Education. Act has created many problems in general and in organising of co-curricular and extra-curricular activities in the school in the school in peeticular because the teachers are given too much of proection. And hence, it does not become possible to get the desired desirable work from them. The teachers' when talked to about this feeling of the head teachers react saying that they are compelled to work during the school hours and they does execute the responsibilities that are assigned. They also say that they have their liked and dislikes which is not taken note of by the head teachers very often while assigning the responsibilities of activities and they add ihat that they do involve themselves in many activities which are not assigned. They also say that the guardians are very often heard saying that there is too much of activities these days in schools and the academic education is highly neglected. These contrasting expressions motivated the researcher to undertake this problem for study to get the pulse of the real situation that prevails in the secondary school.

Topic : A study of involvement of Secondary School Teachers in activities in the school.

Definition of Terms

Involvement—This term means the teacher's role in organing the activies guiding the students to organise and to participate, and also to participate in the activities.

Activities

This term means co-curricular and extra-carricular activities

Delimitations

This study is limited to the Secondary Schools of Abmedabad.

Sample

The data have been collected of about 50 secondary school teachers, seleted by random sampling, serving 10 different schools in Ahmedabad.

Two schools each from five different zones, in which the city is normally divided, were selected by random sampling technique.

Objctives

This study aims to know

1. the average number of activities organised by the teacher in the secondary school.
2. the average number of teachers who organise activities.
   - [i] they are assigned without knowing their choice.
   - [ii] they are assigned knowing their choise and
   - [iii] though not assigned.

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3. the number of activities organised by teachers in the schools.
   [i those assigned without asking them their choice.
   (ii) those assigned by asking them their choice.
   (iii) though not assigned.
4. the average number of male and female teachers who do not involve themselves in the activities assigned to them because of their differences with the head teachers.
5. the average number of teachers who actively involve themselves in different activities to provide a good model and also to motivate the pupils.

Tool :

Inventory prepared by Shri S. T. Kapadia.

Procedure

An attempt was made it know, what different activities are planned and organised in the secondary schools by visiting about five secondary schools—one in each zone. And then an inventory was prepared by the researcher. An inventory consists of 63 items falling under five major beading, namely-General Assembly, Cultural, Physical and Sports. Administrative including holding election of students' council, entrusting and shouldering different responsibilities, maintaining discipline, keeping students' records, office records, examination etc. and miscellaneous activities like guiding and motivating students for extra reading.

An attempt was made to get the responses on the inventory of 80 teachers from ten different schools (eight from each) situated in five zones of the Ahmedabad city. Random sampling teachnique was followed for the selection of schools and teachers.

Out of 80 teachers 40 male and 40 female to whom the inventory was administered only 50 teachers responded satisfactorily, 8 teachers' responses could not be considered because they tick-marked almost all the columns. 7 teachers did not give any response and sent the inventory back, and the rest did not care to the send the inventory either filled in or even blank. The following table shows the no. of male and female teachers whose responses are studied.

Table-1—Table showing the zone wise number of Teachers-male and female-who supplied the information on the inventory administered.

Zone	No. of Teachers		
	Male	Female	Total
Ellisbridge	5	5	10
City	7	3	10
Maninagar	8	2	10
Industrial	8	2	10
Sabarmati-Wadaj	2	8	10
Total	30	20	50

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This study hence is based on the responses of 50 teachers—30 male and 20 female. This shows very clearly that satisfactory responses could be had from 75% of the male teachers and 50% of the female teachers.

To make this study more scientific and reliable 5 head teachers of the schools, selected by random sampling from amonges those schools from which the teachers had given responses on the inventory, were interviewed keeping in view the details of the inventory and also to know their opinions about the teachers, attitude towards activities.

ANALYSIS OF THE DATA

Table-2

Table showing the number of male and female teachers who organise activities falling under five categories as assigned to them by the head-teacher without knowing their choice.

Categories of activities	No. of Teachers			Percentage of Teachers		
	Male	Female	Total	% of Male Teachers	% of Female Teachers	% of Total No. of Teachers
General assembly	16	7	12	50·33	35	46
Cultural	12	15	27	40·00	75	54
Physical	11	2	13	37·00	10	26
Administrative and supervising	20	7	27	67·00	35	54
Miscellaneous	7	3	10	23·00	15	20

The table shows very clearly that the head-teachers assign the responsibilities of activities falling under four categories out of five more to the male teachers than to the female teachers. But the activities falling under one category—cultural are assigned more to the female teachers than to the male teachers.

The headteachers do not assign responsibilities of activities to the male and female teachers equally.

The female teachers are assigned the cultural activities more than the male teachers. The reasons may be the beadteachers' belief that the cultural activity is the province of female teachers and physical and administrative activities are quiet strenuous.

The headteachers preferred male teachers for administrative and supervisory activities to the female teachers.

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The headteachers do not seem to be serious about assigning responsibilities of physical and miscellaneous activities. Only 26 and 20 percent teachers are assigned these activities respectively. But the rest of the activities are assigned to more than 45 to 50% of the teachers.

The following table shows that there are teachers in the secondary schools who does not carry out the responsibilities of some activities because of their difference with their headteachers.

Table-3

Table showing the no. of teachers not involving in the activities assigned to them because of their differences with their headteachers.

No. of Teachers			Percentage of Teachers		
Male	Female	Total	% of MaleTrs.	% of Female Trs.	% of Trs. Total Nos.
4 out of 30	2 out of 20	6 out of 50	13·33	10	12

This table shows that 6 out 50 teachers i.e. 12% teacheas do not involve themselves because of their differences with the headteachers in the activities that are assigned to them. Out of the six, four are the male and two are female teachers and two out of twenty female teachers i.e., 13·33. and 10% teachers respectively do not involve themselve in assigned responsibilities. This means that percentagewise there is quite insignificant difference in the behaviour of male and female teachers. The total percentage of teachers which comes to 12 cannot be considered to be negligible as the teachers of this sort of behaviour, affect the tone and discipline of the school, the entire climate of the school adversely. The other side of the picture is that there are teachers who opt for the activites i.e. they demand the responsibilities of different activities. Not only this, but there are teachers in the schools who, though not assigned the responsiblities of some activities, involve themselves in those activities. Table 4 and 5 give us the data of the no. of such teachers respectively.

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Activities	No. of Teacher			Percentage of Teachers		
	Male	Female	Total	% of Male Tr.s.	% of Female Tr.s.	% of Total No. of Tr.s.
General Assembly	6	6	12	20	30	24
Cultural	10	8	18	33·33	40	36
Sports and Physical	6	1	7	20	5	14
Administrative	14	2	16	47	10	32
Miscellaneous	7	2	9	23·33	10	18

The above table shows very clearly that teachers opt for all types of activities undoubtedly with a difference in percentage. As the table shows more than 25% teachers opt for two specific types of activities namely cultural and administrative. The number of teachers opting for the cultural activities is 18 out of whom 10 are male teachers and 8 are female teachers in terms of percentage 33·33% male teachers and 40 female teachers opt. for this type of activities. Total of teachers opting for this type of activities is 36. The other activity which the considerable percentage of teachers opt for is administrative totally 32 percent teachers and only 2 are female teachers, i. e. 47% of male teachers and only 10% of female teachers opt for this activity. The difference in the percentage of male and female teachers opting for this activity is very great. The reason for this may be that the male teachers like to have on experience of this type of activity which in future may be of great help to them, if they get a chance which they always aspire for, to head the institution.

The physical activity is opted by only 14 percent teachers i.e., only 7 out of whom 6 are the male and 1 is the female. This difference may be interpreted as the unwillingness of the female teachers to opt for strenous activities.

There is a difference of only 10 percent between the male and female teachers opting for the general assembly and miscellaneous activities.

Table 5

Table showing the total no. of teachers voluntarily involve themselves in different activities.

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Activities	No. of Teachers			Percentage of Teacher		
	Male	Female	Total	Male	Female	Total
General Assembly	6	4	10	20	20	20
Cultural	10	5	15	33·33	25	30
Physical and Sports	9	-	9	30	-	18
Administrative	9	2	11	30	10	22
Miscellaneous	12	6	18	40	30	36

This table shows that male as well as female teachers voluntarily involve themselves in most of the activities i. e., there are enthusiastic teachers who like to involve themselves in different activities. Female teachers are not found to be enthusiastic in voluntarily involving themselves in sports and physical activities. And they are also found to be less enthusiastic in volunteering themselves for the administrative activities. As the table shows only 10—i.e., only 2 female teachers voluntarily involve themselves in this activity.

There is no difference in the percentage of male and female teachers involving themselves voluntarily in the General Assembly activities. The percentage as can be seen in the table is 20.

In the other three activities namely, cultural, Administrative and Miscellaneous more than 20 percent teachers voluntarily involve themselves. Undoubtedly, in almost all the activities the percentage of male teachers voluntarily involving themselves is more than that of the female teachers.

The percentage of female teachers voluntarily involving themselves is that highest for the Miscellancous activities as it is so even with the male teachers.

Table-6

Table showing the frequency distribution of teachers involved in total no. of activities that are assigned without knowing that choice, assigned knowing their choice i. e., as they opted for, and voluntarily accepted.

Interval of No. of Activities	X Activities and No. of Teachers								
	Assigned			Opted			Volunteered		
	M	F	T	M.	F.	T.	M.	F.	T.
25 to 21	2	1	3	-	-	-	-	-	-
20 to16	3	1	4	2	-	2	-	-	-
15 to 11	3	2	5	2	-	2	-	-	-
10 to 6	11	10	21	3	3	6	10	7	17
5 to 1	11	6	17	6	6	12	12	5	17
Total	30	20	50	13	9	22	22	12	34

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Table 6-a

Table showing the frequency distribution of percentage of teachers involved in total no. of activities that are assigned to the teachers without knowing their choice, assigned knowing their choice, i.e., as they opted, and voluntarily accepted.

No. of Activities	Activities and Percentage of Teachers								
	Assigned			Opted			Volunterred		
	M.	F.	T.	M.	F.	T.	M.	F.	T.
25 to 21	6·7	5	6	-	-	-	-	-	-
20 to 16	10	5	8	6·7	-	4	-	-	-
15 to 11	10	10	10	6·7	-	4	-	-	-
10 to 6	36·7	50	42	10	15	12	33·33	35	34
5to 1	36·7	30	34	20	30	24	40	25	34
Total	100	100	100	43·4	45	44	73·33	60	68

Table 6 and 6a are the consolidated tables showing the total number of teachers and their percentage involving themselves in the total number of activities which are assigned, opted and voluntarily accepted by them. The table 6 shows that maximum number of activities assigned to the teachers in the interval of 21 to 25 and the total number of teachers who are assigned this maximum number of activities is only 3 out of whom 2 are male and 1 is female. In terms of percentage as in Table 6a & 6 percentage of male and female teachers who are assigned the maximum number of activities. And there is not much difference in the percentage of male and female who are assigned the maximum number of activities as the percentage is 6·7 and 5 respectively.

The tables show that only 12 teachers i.e., only 24 percent teachers are assigned more than 10 activities out of these 12 teachers 8, are male teachers and 4 are female teachers. But out of these 8 male teachers, 4 are such who have opted for more than 10 activities. But no female teacher has opted for more than 10 activities. More specifically read the Table shows that of these 3 male teachers, 2 have opted for the number of activities falling between 16 and 20 as well as the number of activities falling in the interval of 11 and 15 which means that the number of activities fallaing in the interval of 16 and 20 and 11 and 15 are assigned without knowing the choice of teachers, to only 1 (one) teachers each i.e., only 3·33 percent each which is very insignificant. On the other hand, 4 female teachers i.e., 25 percent female teachers are assigned more than 10 activities without knowing their choice.

The tables 6 and 6a, show that 17 teachers i.e., 34 percent teachers are assigned the number of activities following in the interval of 1 and 5 and the same numbr and percentage of teachers volunteer themselves for those many activities. The same number of

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teachers volunteer for the number of activities falling in the interval of 6 and 10. No male and female teachers as can be seen from the above tables voluntarily involve themselves in more than to activities.

The number of activities between 1 and 10 are assigned to 76 percent teachers i. e., 38 teachers of whom 22 are the male teachers and 16 are female teachers. This difference appeares to be quite significant but it is not so as these number are out of 30 and 20 respectively, percentage-wise 74 percent male teachers and 80 percent female teachers are assigned these activities. But the table-6 shows that 6 female teachers are assigned the number of activities following between 1 and 5 and the same number of teachers opt for those many activities.

The maximum number of teachers who are assigned the number of the activities following in the interval of 6 and 10 is 42 percent i.e., 21 of whom 11 are male teachers, percentage-wise they are 36·7 i.e., 37 and 60 percent respectively. This difference is also very significent. The difference between the total number of teachers who are assigned the activities falling between 6 to 10 is 21 i.e., 42 percent and the number of teachers who opt for these many activities is only 6 i.e., 21 percent and the difference between these two is of 15 i.e., 30 percent wnich is very significant.

The tables show that only 9 female teachers out of 20, i.e., 45 percent opt for the activities may have giving their choice, and 13 out of 30 i.e., 45 percent male teachers opt for the activities. This shows that there is no considerable difference between the perceentage of male teacher and female teachers who opt for the aciivities.

The responses of the teachers on different specific items of the inventory also gave an information about the teachers active involvement in different activities by way of their participation in activities with a view to providing a good model to pupils and to encoourage them to participate in the activities. The information is tabulated in the Table no. 7 given below.

Table-7

The table showing the total no. of teachers who involve themselves in different activities by participating actively.

Activities	No. of Teachers			Percentage of Teachers		
	Male	Female	Total	Male	Female	Total
A. General Assembly :						
1. To deliver talks or To paresent some item regularly	3	-	3	10	-	6
B. Cultural :						
1. Poetry recitation	2	4	6	6·66	20	12
2. Prose Reading	3	3	6	10	15	12

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Activities	No. of Teachers			Percentage of Teachers		
	Male	Female	Total	Male	Female	Total
3. Eleocution competition.	5	2	7	16·6	10	14
4. Musical Items	3	7	10	10	35	20
5. Dramatic competition	6	2	8	20	10	16
6. Wall-Magazines.	2	1	3	6·66	5	6
7. Organising academic discussion and deliberation	4	1	5	13·33	5	10
8. Preparing school magazine	3	2	5	10	10	10
9. Subject forum activities	4	1	5	13·33	5	10
10. Guiding Students to participate in different cultural activities	4	3	7	13·33	15	14
11. Arranging school picnics and tours	7	-	7	22·33	-	14
C. Physical and Sports :						
1. Preparing teams for inter-school games competition.	5	-	5	16·66	-	10
D. Administrative :						
1. Guiding pupils in shouldering responsibilities as teachers in Teacher's Day Celebration	3	2	5	10	10	10
E. Miscellaneous :						
1. To associate actively with some office bearer of the students' council in his activities.	8	2	10	27	10	20
2. To motivate pupils for extra reading	8	2	10	27	15	22
3. To suggest literature for extra reading to pupils	9	3	12	30	15	24
4, To go for social service, to go to help in the areas affected by natural calamities	4	1	5	13·33	5	10

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The Table—7 shows that :

1. The female teachers do not involve themselves actively in (three) 3 out of (eighteen) 18 activities. These activities are : (1) Preparing teams for inter-school games competition, (2) Arranging school picnics and tours and (3) delivering talks or presenting same items in General Assembly. Activities 1 and 2 listed above are quite strenuous and are the out of classroom and out of school activities and the last i.e., the 3rd activity expects the teacher to spare good time for preparation and to have possessed some special skill. In the activities 1 and 2 more then 15 percent male teachers 16.66 and 23.33, teachers involved themselves actively but in the last i.e., the 3rd activity only 10 percent teachers involved themselves.

2. In cultural activities namely, poetry recitation, prose reading, musical items, and guiding students to participate in different cultural activities, only the percentage of female teachers involved is greater than that of the male teachers.

3. More then 20 percent teachers' involved themselves in 3 activities out of 4 noted under the Miscelleneous. These activities are in-the —school activities and 2 out of 3 numbering 16 and 17 are co-curricular activities and i. e., numbering 15 the extra curricular activities. In the co-curricular activities the largest no. of male and female teachers involed themselves.

4. In the activities other then those discussd above i.e., the activities no. 2, 3, 5, 11, 16 and 17 only 1, or 2 i. e., 5 or 10 percent female teachers involved themselves.

5. 15 percent or more male as well as females teachers involved themselves activities in only 7 out of 13, i.e., 39 percent and 16 out of 18, i.e., 33 percent activities respeetively.

6. Greater percentage of male teachers then that of the female teachers involed themselves in 12 out of 13, i. e., 66 percent activities. The same percentage of male and famal teachers involed themselves actively only in 2, i. e., 11 percent activities.

The information and opinions of the headteachers :

The information could be gethered by interviewing them which runs as under :

1. The teachers at large, i.e., about 75 percent do not involve themselves in activities willingly, sincerely and whole heartedly.

2. About 80 percent teachers do not come forward to give out their choice of activities when they are asked and they grumble when they are assigned different activities.

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3. About 80 percent teachers like to involve themselves in such activities which would not expect much of active participation.

4. Most of the teachers decline to get involved in activities as they are not ready to spare even little more time then the time specified in the secondry Education Act of the State.

5. They unanimously agree that inspite of their desire to assign the work load of activities equally it doeε not become possible for them as the able and efficient and willing teachers are assigned many activities in the interest of pupils and also the school.

6. About 50 to 65 persent guardians consider the activities in the school unnecessary and disturbing the academic atmosphere in the school and also effecting the pupils' achievement in the examination adversely.

7. Most of the headteachers complained that they attempt to involve teachers in different activites the D. E. O. S. do not appreciate teachers doing different activities in the school, which they say is very necessary to sustain teachers' involvement in activities.

8. The headteachers express fairly good satisfaction at the teachers' involvement in most of the activities listed under the Miscellaneous activities.

Findings and Suggestions :

1. The activities are not assigned to male and female teachers equally.
2. The activities—Administrative must be assigned to and distributed amongst more number of teachers.
3. Fairly good percentage of teachers opt for different activities.
4. About 25 percent teachers are assigned more then 10 activities and about 14 percent teacher are assigned more than 15 activities. This uumber of assigned activities makes a heavy workload for teacher.
5. About 34 percent teachers are not assigned more than five activities.
6. There are 68 percent i.e., 34 enthusiastic teachers in schools of whom 22 are female teachers who voluntarily invole themselves in different activities.
7. Very small number of teachers involve themselves actively in those activities which expect the teachers to spare good time for preparation.
8. 36 percent teachers—male and female—voluntarily involve themselves in and 18 percent opt sor miscellaneous activities.

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Suggestions :

1. The teachers must not be overburdened with activities.
2. The activities must be fairly equally distributed amongst the teachers—male as well as female.
3. Teachers opting for different activities must be assigned those activities and all the teachers must be motivated to opt for fairly good numbers of activities numbering 1 to 10.
4. The teachers must be made to realise that their job is simply not to cover the course books from cover to cover but is to attempt to achieve the objectives of education. And for that they should involve themselves in activities and work on activities jointly.
5. The teachers may involve themselves in activities so actively and sincerely that they will be able to provide a good model and also motivate pupils to participate in activities to have education through experience.
6. The enthusiastic teachers must be more encouraged and appreciated in public to motivate and to infuse enthusiasm in other teachers to involve themselves in different activities.

Follow up :

1. To study the impact of activities on the achievement of pupils in academic subjects.
2. The comparative study of the results at the public examination of these schools where activities are done in good number used where those are done in less number.

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The Effect of Frustration and Inequity on the Displacement of Aggression

Mrs. Parveen Sulthana*

The study under report aimed at ascertaining the role of frustration and negative inequity in the displacement of aggression. The sample comprised of 160 adolescent boys and girls from Central School Kanchan bagh and St, Xavier's High School Santoshnagar. The results suggest that negative inequity rather than frustation alone leads to displacement of aggression. Even the result of equity condition delivered less number of noxious stimulation as negative equity had been maintained.

The concept of Displacement originated with Freud (1936) and referred to attempts by an actor to harm a second person after experiencing attack, provocation or frustration from another person.

According to Dollard et. al (1930) inhibited aggressive action will be replaced by

(a) alternative, less punishment burdened acts or
(b) displaced upon other targets.

Howrer, Miller and Sears (1939) considered displacement and Catharsis as processes that allow the identification of responses known as agression. They argued that the substitute ability of responses and targets reveal a need to discharge aggressive drive, which in turn is intensified by frustration.

According to Berkowitz (1965) Displacement of aggression is not cathartic. At this juncture a question arises as to why does displacement occur when it is not tension reducing. In view of Nacci and T. Tedeschi (1977) displacement findings in terms of social comparison processes, category accessibility (perceptual vigilance), guilt by association and assignment of blame, demand awareness o fsubjects and restoration of equity.

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OBJECTIVES :

The present study was undertaken with the following objectives :

1. To findout whether frustration leads to aggression.
2. To ascertain the role of frustration and negative inequity in the displacement of aggression.
3. To ascertain the intent of the subjects to harm the experimental confederate.

In order to achieve the above mentioned objectives, the following research tools and instruments were used.

1. A Spelling test.
2. Koh's Block Design,
3. Shock box.

In order to ascestain the intent of the subjects to harm the experimental confederate, they were given a choice of verbal appreciation, verbal depreciatiod, gifts, shocks and neutral responses to improve the performance of the learner.

To test the objectives emprically four experimental conditions were created.

1. Control condition.
2. Direct Aggression.
3. Displacement
4. Equity Condition.

1. Control Condition :

In this condition each one of the forty subjects were coupled with a confederate (according to a preplanned list of subjects and confederates, formed on the basis of the Tables of random numbers) and were asked to arrange the blocks of Koh's block design according to the pattern of card number nine. After completion of this task, they were coupled for a subsequent learning task in which their roles were reversed. The subjects were given the role of a teacher and the confederate was given the role of a learner. The subjects were asked to promote the performance of the subjects by the use of veabal appreciation, verbal depreciation, gifts electric shocks and neutral responses.

2. Direct Aggression Group :

In this condition each one of the 40 subjects were frustrated by their respective confederate one by one, while they were engaged in the arrangement of the koh's block design test. Then they both were paired for a subsequent learning task with reversed roles. The same procedure was followed for the rest of the subjects of this group.

3. Displacement Group :

In this group the subjects were frustrated by their respective confederate while arranging the blocks of the Koh's block test. The confederate who had frustrated the subject left the room on some pretext and another confederate (equally liked by the subject was volunteered to serve in the experiment as a learner. The subject was coupled with the second confederate as a teacher for the subsequent learning task.

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4. **Equity Condition:**

In this group each on of the 40 subjects, and their respective confederates were frustrated by a third confederate in the presence of each other while they were engaged in the arrangement of the Koh's block and the then the subject was coupled with the second confedrate who had been frustrated by the third confederate for the subsequent learning task with reversed roles.

Sample Selection :

Eighty boys and eighty girls in the age range of 14 to 17 years, scoring 50% and more in Scho-lestic Tests, were selected from Central Scoool, Kanchanbagh and St. Xavier's High schoel Santoshnagar. Tnis screening was done in order to select petenicom students with a history of success, so that frustration could be induced by failing them in their experimental tasks. These subjects were assigned to the above mentioned four experimental gropus by following the table of random numbers.

Studedts of IX and X classes were asked to nominate two popular boys and two popular girls from their classes to be taken as confederates. (Confederates were taken into confidence by the experimenter regarding the experimental deceptions and were instructed to maintain the deceptions till the completion of the study).

The confederates were explained the design and the purpose of the study and were informed that though thep would not get any shocks they have to express feelings of pain. In order to give them practice the conferates were paired as subjects and confederates and were given practice to deliver frustrating remarks to the subjects.

For the subsequent learning task the confederates were trained to serve as learners to the subjects, and were instructed to spell five words rightly and to misspell five words. The confederates were strictly instructed by their principals and teachers to maintain the decodtion till the experimenter explained it to the students.

Procedure :

To create a sense of setf-involvement the subjects were told by their teacher that the experimenter would select competent students for inter school and inter state scholastic competetions. Eighty boys and eighty girls secouring 50% and more were seleted and assigned to different experimental groups and to either a boy or a girl confederate of their class following the table of random numbers. The experimenter prepared a list of subjects and their respective confederates for all the experimental groups,

One day earlier to the commencement of the experiment, the experiment had arranged the shock box and the Koh's block design in the physics laboratory. On reporting to the laboratory all the subjects were detained in the waiting area. The experimenter escorted one subject and one confederate (accordidg to the list of subject confederate combinations) to the table where shoc–box and Koh's block test were arranged. Then both were seated and the subject was asked to arranga the Koh's blocks while the confederate was

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asked to help the subject for arranging the blocks and to inform about the time schedule. The confederate frustrated the subjects in all experiment conditions except under control condition.

Subsequently the subject and the confederate were coupled for a learning task in which their roles were reversed,

The subject was given the role of a teacher whereas the confederate was asked to spell out ten words pronounced by the subject. The subject could use verbal appreciations, verbal depreciations, gifts, shocks and neutral responses to promote the performance of the confederate. The confederate spelled five words right and five words wrong according to the prior instructions of the experimenter. The recorded the number of shocks delivered by the subjects to the confederate and subjected the data to statistical analysis for further inferences.

RESULTS

The number of verbal appreciations, verbal depreciations, gifts, shocks and netural responses given by the subjects to promote learning among the confederates were subjected to Analysis of Variance and Duncan's New Multiple Range Sests.

Number of Verbal Appreciation :

The analysis of varience reveals that the subjects of control direct aggression, displacement and equity restoration groups differed at .01 level. For further analysis Duncan's range tests were compouted and tabulated in table No.- 1.

Table No. 1 : Presents Mean Values for the number of verbal appreciations

	Displacement	(Direction-Aggression)	Control	equity
Means	.7	·75	1·83	1·85

As depicted in the table the subjects of displacement and direct aggression group significently less number of verbal appreciations compared to the subjects of control and equity groups.

Number of verbal depreciations :

ANOVA depicts that the subjects of control, direct aggression displaeement and equity groups differ significently at ·05 level. To ascertain the extent of difference Duncans range tests were computed and are presented in Table No. 2

Table No, 2 Mean values for the number of Verbal Deprecations

	Equity condition	Control	Displacement	Direct Aggression
Means	1·65	1·85	2·15	2·53

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As indicated in the table the subjects of direct aggression used maximum number of verbal depreciations and differed significantly from displacement, control and equity conditions.

Number of Gifts :

As ascertained from ANOVA, the experimental groups differ at ·01 level. The mean differences are presented in the following table.

Table No· 3 : Shows the Means number of Gifts

	Displacement	Direct aggression	Equity	Control
Means	.22	,23	.97	1.1

It can be inferred from the above table that the subjects of displacement and direct Aggression differ significently from the subjects of equity and control group in the use of gifts to promote the performance of the confederates.

Number of Shocks :

The ANOVA indicates that the subjects of control, direct aggression, displacement and equity group differ, at .01 level. To find out the extent of differences between the means of the above mentioned groups Duncan's new multiple range tests were computed. The same are presented in the following table.

Table No. I : Mean values for the Number of Shocks delivered to the Confederates

	A	B	C	D
	Control condition	Equity	Direct Aggression	Displacement
Means	.82	.925	2.05	2.23

The results of the present experiment indicate that the subjects of the control and equity conditions don't differ significantly with each other but differ significantly with the subjects of direct aggression and displacement group. A contrast between Direct aggression and displacement groups reveals no significant difference but they differ significantly from the subjects of control and equity conditions.

Number of Neutral Responses :

ANOVA shows that the experimental groups differ at .01 level. To display the mean differences Duncan's New Multiple Range tests are computed and presented in the following table.

Table No.-V depicts Number of Natural Responses given to the canfederate.

	Displacement	Direct Aggression	Control	Equity
Means	.7	.85	4.27	4.7

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The result of the Neutral responses confirm the trend of the other incentives. The subjects of displacement and direct aggression used significantly less number of neutral responses to promote the performance of the confedeeate compared to the subjects of control and equity groups.

DISCUSSION

The findings of the present study are in confirmity with those of Holmes (1972) Nacit & T. Tedeschies (1977).

The result shows that the frustrated subjects delivered more shocks and verbal depreciations than those who were not frustrated; but when negative equity had been maintained by frustrating both the subject and the confederate (in the equity condition), frustration did not result in delivering noxious stimulation. In other words, negative inequity rather than frustration alone leads to the delivery of noxious stimulation.

The fact that the subjects of the displacement group delivered almost equal number of shocks and verbal depreciations as that of the direct aggression group, points out towards the displacement effect.

1n control conditions equity had been maintained as both the subjects and the confederates were not frustrted where as in the direct aggression and displacement conditions the subjects were frustrated by their confederates who belonged to their classes and hence deserved the same treatment as that of their confederates. But when the confederates frustrated the subjects, it created inequity which prompted them to restore equity by delivering more number of shocks and verbal depreciations than the demand of the experiment.

In equity condition though the subjects were frustrated, they did not deliver more noxious stimulations as that of the subjects of direct aggression and displacement condition as their counter-parts (confederates) too were frustrated like them. So in equity condition the subjects did not deliver more shocks as negative equity had been maintained. It was commented by Naccy and T. Tedschi (1977) that research on Aggression failed to as certain intent to harm the experimental confederate and most of the investigators intoent coverup stosies to infer the intent to harm. The present study is an attempt to ascertain the intent to harm, by providing the subjects a choice of verbal appreciations, verbal depreciations, gifts, shocks and neutral responses. The results empirically prove that frustrated subjects internationally made use of verbal depriciations and shocks more frequently were as the subjects who were not frustrated made frequent use of verbal appreciation gifts and netural responses. Thus, the intent to harm has been ascertained.

CONCLUSIONS

The hypothesis that frustrated subjects would deliver more noxious stimulations than those who were not frustrated, has been confirmed, However, when equity was maintained with respect to frustration, (as in the equity condition) it (frustration)

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had no effect on the harm doing behaviour of the subjects. So the subjects of control and equity condition had delivered least number of shocks and verbal depreciations compared to the subjects of direct regression and displacement groups. The subjects of direct aggression and displacement groups delivered significently more number of shocks and verbal depreciations not merely to reduce the drive but to bring about negative equity in the experimental situation. Even the result of equity condition supports this notion as the frustrated subjects of equity condition did not deliver noxious stimulations since negative equity had been maintained.

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Correlates of Modernity and their Factorial Structure

Satvir Singh and Monica Shergill*
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Psychological variables that are associated with modernity and traditionality are studied. Nineteen different psychological variables were reliably measured on 150 university students. Results showed that high scorers on modernity tend to be economically active, upward striving, interested in career, alert toward external dangers and dominated by erg for normal hetrosexual relation, low scores on activity preference, social repute and urge to excel were associated with traditionality. Further, modernity and traditionality are functionally independent and contradicts the earlier findings that they are the opposite poles of the same dimension.

Many studies have been conducted in the field of modernity by social scientists during the past few decades. Attempts have been made to develop scales to measure modernity (Dawson, 1967 : Dawson *et. al.*, 1971 ; Doob, 1967 : Guthrie, 1970 ; Kahl, 1968 : Ramneek *et. al.*, 1978 ; Smith and Inkeles, 1966 ; Stephenson, 1968) and to relate modernity to ecological systems (Berry, 1966), neuroticism (Dawson, 1973), need achievement (Dawson *et. al.*, 1972), and socialization practices (Witkin *et. al.*, 1962 ; Dawson *et. al.*, 1972 ; Singh, 1982). However, these studies have been done with male subjects. The data that do exist on female subjects are ambiguous and contradictory (Singh, 1982). Thus the present study was an attempt to reconcile inconsistencies in the literature. To achieve these ends several variables were examined to determine their relationship with modernity. Furthermore, it is a twopronged approach simultaneously

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aimed at locating the variables that are associated with modernism and its opposite traditionalism, utilizing a modernity scale with broader sample of items than-to fore employed.

METHOD

One hundred and fifty girl students of Guru Nanak Dev University, Amritsar comprised the sample for the study. They were administered : (a) An Indian adaptation of the Cattell and Horn (1964) Motivation Analysis Test (Hundal, 1977), which attempts to measure 10 psychologically meaningful unitary motivational systems covering a person's drives (Mating, Assertiveness, Fear, Narcism-Comfort and Pugnacity) and Sentiments (Self-Concept, Super-ego, Career, Sweet-heart-spouse and Home-parental); (b) Survey of work values (Singh, 1976), which contains six scales measuring pride in work, work involvement, Activity preference, Attitude towards earning, Social status of work and upward striving. (c) Adapted version of Buss's Orientation Inventory (Hundal and Singh, 1975) which gave measures of task, self and interaction orientations. (d) An Indian adapted version of Dawson's Traditional-modern attitude scale (Ramneek, Dawson & Singh, 1978) was used for measuring modernity. It consists of 25, cultural meaningful sub-scales. Each of 25 minor sub-scales has for items comprising the major sub-scales : (1) Traditional ; (2) Semitraditional : (3) Semi-modern ; (4) Modern. These four sub-scales, in turn, have 25 items. The response scales are transformed to scores ranging from 5 (strongly argee) to 1 (Disagree strongly) are then summed. The scale, then is scored in two directions, down each of the 25 minor sub-scales and across the four 25 item major sub-scales- To use in the present study, only two major sub-scales, i. e., modern (Modern+Semi-modern) and Traditional (Traditional+Semi-traditional) were scored across the 25 minor sub-scales.

RESULTS AND DISCUSSION

Correlational Analysis

The product-moment correlations were computed for the raw scores on 21 variables. The main vector of interest in the intercorrelation matrix was the vector of correlations with the measures of modernity and traditionality. The notable findings may be summarized as follows :

The significant correlations ($p>.05$) of modernity scores were with alertness to external dangers, attitude toward earning, upward striving, interest in career and mating drive. These correlations indicated that high scorer on modernity tend to be economically active, upward striving, alert toward external dangers, interested in career and normal hetro-sexual relation.

On the other hand, Low preference for activity, Low concerned about social repute, attachment to Sweet Heart and low urge to excel tend to promote traditionality.

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Factor Analysis

The product-moment correlations among the 21 variables were computed and the eigen values calculated. The scree test (cattell, 1966) indicated six factors, which were extracted by an interative principal axes procedure. Each principal axes matrix was subsequently rotated to the Varimax Criterion, which has proven to provide satisfactory simple structure. The salient variables were considered to be those pattern values $\pm \geqslant .3$.

Factor I (Traditionality) :

Factor I was composed of variables that deal with traditionality, low interest in career, low preference for activity, economically less active and somewhat less dominated by an urge to excel. This factor resembles Guthrie (1970) "Traditionality" factor, and has been labelled accordingly.

Factor II (Modernity) :

Factor II has been labelled "Modernity" in view of the high loadings on the measure of modernity. The loading pattern on this factor suggests that females scoring higher on modernity tend to be upward striving, economically active, interested in career, and opposite sex and dominated by sense of duties. This portrait of a with high modern attitudes quite agree with the one given by Inkeles (1966) and Stephenson (1969).

Dawson's (1967) observation that despite extensive modern contact, more highly traditional concepts are less likely to change as quickly as less important attitudes, is also born out by the loading of traditionality .38 on this factor.

Factor III (Intrinsic Values) :

Factor III is primarily revealed by the work values scales : Upward striving, activity preference and involvement in work. This seems to be one stressing the intrinsic aspect of work ; that is work at its own reward. The variable showing significant loadings on this factor support the identification of the factor as on of "intrinsic values" (Wollack *et al.*, 1971).

The moderate loading of career on this factor suggests that persons interested in career are dominated by intrinsic values. The loading of traditionality (—.67) on this factor further suggest its inverse relationship with intrainsic values.

Factor IV (Ergic Suppression vs. Ergic Expression).

This factor is somewhat similar to Cattell's (1957) Second-order factor of Ergic suppression vs. Ergic Expression. Thus (in agreement with Cattell; this factor might as well as be labelled as "Ergic suppression vs Ergic Expression" factor. Its structure, however, does not fully agree with the Cattell's factor. The differences can be attributed to different sets of tests included to in the two studies.

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Factor V (Pugnacity)

Factor V has been named "Pugnacity" due to the loading pattern exhibited by the variables, and it corresponds somewhat to Cattell and Horn (1964) 'Pugnacity' factor.

Keeping in view the test items, an inference can be drawn that pugnacity in females may not denote hostile or destructive impulses, but mean interest in violent movies and hostile attitude towards enemy.

Factor VI (Extrinsic Values) :

The variables loaded on this factor are concerned with Extrinsic or reward values. The main components of this factor are concern with social status of the work, attitude toward earning and preference for activity. The variables showing significant loadings on this factor support the identification of this factor as one of "Extrinsic variables" (Wollack *et al.*, 1971).

In conclusion, a review of the information provided by the correlational and factor analyses shows that both the analyses supplement each other. It also reveals that work values and drives play an important role in promoting and retarding modernization. Furthermore, modernity and traditionality are functionally independent and contradicts some of the earlier findings that they are opposite poles of the same dimension.

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Authoritarian Submission Among Different Types of Indian Leaders

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Present study was undertaken to examine the levels of authoritarian submission among different types of Indian leaders. Hence, a sample of 1000 *Indian leaders of four types (religious, intellectual, bureaucratic, and democratic) each of which had five component sub-leaders, drawn from five Hindi speaking States of India (Uttar Pradesh, Madhya Pradesh, Rajsthan, Haryana, and Bihar), was administered the Final Form of California F-Scale. The responses relating to authoritarian submission were analysed with the help of ANOVA* $5 \times 4 \times 5$ *experimental design and Duncan's New Multiple Range Test. The results, in brief, revealed that four types of Indian leaders and their component sub-leaders differ from one another on authoritarian submission. The States of domicile have been found to be contributory agents to these differences.*

INTRODUCTION—Authoritarian submission, the second dimension of California F. Scale, is measured by six items (i. e. item No. 1, 5, 6, 7, 8, and 9). This dimension indicates an emotional and extreme need to submit to external authority who can signal without ambiguity what is to be believed and valued. Theoretically, authoritarian submission is a need for external controls that are necessary for an authoritarian because he does not have well developed internal standards or controls that may guide his behaviour according to principles. Thus, the essence of authoritarian submission is believed to lie in deficient superego or conscience of the authoritarian (Dillehay, 1978).

Theoratically, the nine dimensions of the F. Scale represent a single syndrome of correlated factors. Therefore, a person displaying a considerable amount of one or

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several of these is expected to be characterised by others also. Despite, several conflicting evidence in support of this expectation (Adorno et al, 1950 ; Bhushan, 1957; 1960; 1982; Christie, 1958; Dillehay, 1978; Kirscht, and Dillehay, 1967; Mc Closky, 1958; Mead and Whitteker, 1967; Shills, 1954) efforts have not been made so far to examine these relationships on the populations of different types of leaders who excersise a considerable amount of authoritarianism in their day-to-day lives. Hence, present study, at the first stage, seeks to examine the levels of authoritarian submission among different types of Indian leaders and their component sub-leaders. Recently, Dubey has noticed that different types of Indian leaders and their component sub-leaders differ from one another on manifest anxiety, persistence-disposition, authoritarianism, authoritarian conventionalism, authoritarian aggression, authoritarian anti-intraception, authoritarian superstition and stereotype, authoritarian power and toughness, authoritarian projectivity, authoritarian destructiveness and cynicism, and authoritarian sex (Dubey, 1984; a; 1984 b; 1985 a; 1985 b; 1985 c; 1985 d; 1985 e; 1985 f; 1985 g; 1986 a; 1985 b). Hence, it was presumed that :

1. the four types of Indian leaders would differ from one another on authoritarian submission.
2. the five component sub-leaders of each of the four types of Indian leaders would differ from one another on authoritarian submission :
   (a) the five component sub-leaders of Indian Religious leaders would differ from one another on authoritarian submission,
   (b) the five component sub-leaders of Indian Intellectual leaders would differ from one another on authoritarian submission,
   (c) the five component sub-leaders of Indian Bureaucratic leaders would differ from one another on authoritarian submission,
   (d) the five component sub-leaders of Indian Democratic leaders would differ from one another on authoritarian submission,
3. the Indian leaders belonging to different States of India would differ from one another on authoritarian submission,
4. the Indian Religious leaders belonging to different States of India would differ from one another on authoritarian submission,
5. the Indian Intellectual leaders belonging to different States of India would differ from one another on authoritarian submission,
6. the Indian Bureaucratic leaders belonging io different States of India would differ from one another on authoritarian submission,
7. the Indian Democratic leaders belonging to different States of India would differ from one another on authoritarian submission.

METHODOLOGY

(a) **Sample** :— One thousand Indian leaders of four types (250 Religious, 250 Intellectual, 250 Bureaucratic, and 250 Democratic) were selected by way of Multi-state-

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stratified-quota-random-sompling from five Hindi speaking States of India (Uttar Pradesh, Madhya Pradesh, Rajsthan, Haryana and Bihar). Each of the four types of Indian leaders were comprised of their five component sub-leaders (i. e. Religious leaders ; 50 Hindus, 50 Islamics, 50 Christians, 50 Jains, and 50 Buddhists ; Intellectual leaders : 50 Educationists, 50 scientists, 50 Artists, 50 Advocates, and 50 Literati ; Bureautic leaders : 50 I. A. S. Officers, 50 P. C. S. Officers, 50 District Planning Officers, 50 Block Development Officers, and 50 Executive Officers of Municipal Boards; and Democratic leaders; 50 Members of Parliament, 50 Members of Legislative Assemblies, 50 Destrict Boards Chairmen, 50 Block Panchayats' Chairmen, and 50 Municipal Boards' Chairmen).

(b) **Research tools** :— The Final Form of California F. Scale (Adorno et al, 1950) and its Hindi adaptation (Dubey, 1984 c) were selected as research tools to indentify the levels of authoritarian of different types of Indian leaders and their component sub-leaders. The reliability (even-odd : 0.81 to 0.89 for English version and test-retest : 0.79 to 0.82 for Hindi version) and validity (with E & PEC : 0.52 to 0.73 for English version) and 0.61 to 0.77 for Hindi version were found to be satisfactory on Indian samples (Dubey, 1984 d).

(c) **Procedure** :— Ten districts from each of the five Hindi speaking States of India were randomly selected. The Chairmen of these selected districts (a type of component sub-leaders of Indian Democratic leaders) were requested to select one Member of Parliament, one I. A. S. Officer, one Hindu Religious leader, one Educationist from their district areas. The selected Members of Parliament were requested to select one Member of Legislative Assembly, one District Planning Officer, one Islamic Religious leader, and one Scientist from their Parliamentary Constituency areas. The selected members of Legislative Assemblies were requested to select one Block Panchayat Chairman, one P. C. S. Officer, one Jain Religious leader, and one Artist from their Lgislative Constituency areas. The selected Block Panchayats' Chairmen were requested to select one Chairmen of Municipal Board,one Block Development Officer, one Christian Religious leader, and one Advocate from their Block Prnchayat areas. And, the selected Chairmen of Municipal Boards were requested to select one Municipal Executive Officer, one Buddhist Religious leader, and one Literature from their Municipal areas. Thus, the whole sample was comprised of four types of leaders; each type of leader was comprised of its five component sub-leaders and, each type of component sub-leaders were comprised of its ten elements from each of the five Hindi speaking States of India, In other words, one sample=4 leaders × 5 component sub-leaders × 10 elements × 5 States = 1000 elements.

The selected elements were mailed California F. Scale—one in Hindi and the other in English alongwith one personal request-cum-instruction letter guiding them the way of recording their responses and returning the responded answer sheet alongwith the questionnaires. This process of data collection was very difficult and time and money consuming. But, the investigator could fetch all the responded answer sheets alongwith

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questionnaires through repeated reminders, contacts through personal friends, and, in some cases, his personal contacts. Then, the responses related to authoritarian submission were analysee with the help of ANOVA (5×4 ×5 experimental design) and Duncan's New Multiple Range Test.

RESULTS AND DISCUSSION

Table No. 1

Mean ane Standard Deviations of the scores on Athoritarian submission for Indian leaders (as a group), four types of Indian leaders, and five component sub-leader of each of the four types of Indian leaders under each of the five Hindi speaking States of India.

Leaders	Sub leaders	U.P.	M.P.	Raj	Har.	Bih.	Mean	S.D.
	Hindu	36·70	36.10	37·00	37·50	35·70	36·60	1·86
	Islam.	31·50	33·30	33·20	34·20	32·90	33·02	3·00
Religious	Christ.	24·80	24·70	25·70	25·10	24·10	24·80	3·28
	Jains	32·30	32·60	32·90	31·90	31·80	32·30	2·63
	Buddh.	33·40	32·70	32·30	33·10	32·40	32·78	2·23
Means		31·74	31·19	32·22	32·36	31·38	31·92	—
Standard Deviations		4·79	4·37	4·37	4·93	4·77	—	4·66
	Edn.	25·80	28·80	25·60	25·40	26·50	26·42	3·22
	Sc.	23·00	24·20	23·20	24·70	21·90	23·40	3·54
Intellecutual	Advo.	22·60	21·70	23·60	23·80	22·80	22·86	3·15
	Artists	28·80	25·50	26·30	27·20	27·40	27·04	3·48
	Lit.	29·40	28·90	28·80	28·10	29·60	29·16	2·83
Means		25·92	25·82	25·70	25·84	25·60	25·78	—
Standard Deviations		3·97	3·83	4·29	3·75	4·18	—	4·02
	I.A.S.	25·20	26·90	24·50	26·40	26·00	25·49	3·64
	P.C.S.	27·50	28·60	27·40	27·20	29·60	28·06	3·37
Bureaucratic	D.P.O.	29·70	30·60	29·70	29.20	31·80	30·20	2·97
	B.D.O.	30·80	33·00	30·60	31·80	31·50	31·54	2·74
	E.O.	31·70	31·80	32·10	31·60	32·00	31·84	3·26
Means		28·98	30·18	28·86	29·24	30·18	29·49	
Standard Deviations		4·10	3·95	3·62	3·88	3·98	———	3·94
	M.P.	30·00	28·90	27·80	27·80	29 40	28·78	2·73
	M.L.A.	29·20	33·00	30·00	30·70	31 90	30·96	3·42
Democratic	D.B.C.	28·00	27·60	27·50	25·70	35·00	28·76	4·67
	B.P.C.	25·90	35·50	25·00	29·50	30·50	29·22	5·85
	M.B.C.	19·70	26·20	33·30	26·30	33·10	27·72	7·42
Means		26·56	30·24	28·72	28·00	31·92	29·09	——
Standard Deviations		4·73	6·16	4·52	4·59	4·06	———	5·22
General Means		28·30	29·53	28·87	28·86	29·77	29·06	——
Gen. Standard Deviations		4·87	5·18	4·83	4·92	4·22	———	4·99

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The General Mean and Standard Deviation for the whole data (G. Mean=29.06; G. S. D. =4.99), as shown in Table No. 1, indicates that Indian leaders, as a group, are deviated toward positive direction of authoritarian submission.

The complete Analysis of Variance, as shown in Table No. 2, depicts that Indian leaders belonging to dfferent States (F=5.942; *df*=4/900; p <.01), four types of Indian

Table No. 2

Complete Analysis of Variance in 5×4×5 Experimental Design.

Sources of	Sum of Squares	*df*	Mean Squares	*F*
Treatments :	14524·811	99	146·715	12·668**
States (A) :	215·316	4	68·829	5·942**
Leaders (B) :	4781·291	3	1593·763	137·608**
Sub-leaders (C) :	1700·806	4	425·201	36·712**
(A) × (B) :	694.764	12	57·897	4·998**
(A) × (C) :	529·314	16	33·082	2·856**
(B) × (C) :	4931·994	12	410·999	35·486**
(A) × (B) × (C) :	1611·326	48	33·569	2·898**
Error (Within) :	10423·700	900	11·581	———
Totol :	24948·511	999	———	———

** *F*. ratios are significant beyond .01 level of confidence.

leaders (F=137.608; *df*=3/9000; p<.01), and five component sub-leaders of each of the four types of Iadian leaders (F=36.712; *df*=4/900; p<.01) very significantly on authoritarian submission scores. These variations, however, are not free form three bi-variate and one tri-variate interactions (AB: F=4.998; *df*=12/900; p<.01; AC F=2.898; *df*=16/900; a<.01; BC : F=35.486; *df*=129000; a<.01; ABC: F=2.898; *df*=48/900; a>-01). Hence, Duncan's New Multiple Range Test was invited to exmine the significance of differences.

Table No. 3

Duncan's New Multiple Range Test applied to the difference among four types of Indian leaders (N=250 in each case).*

	(1)	(2)	(3)	(5)	Shortest
	I. L.	D. L.	B. L.	R. L.	Significant
Means	25·78	29.08	29·49	31·92	Ranges (P.01).
IL=25·78	———	3·30	3·71	6·14	R2=0·713
DL=29·08	———	———	0·44	2·87	R3=0·817
BL=29·49	———	———	———	2·43	R4=0·839
	I. L.	D.L.	B.L.	R.L.	

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Duncan's New Mtltiple Rang Test (Table No. 3), as applied to the differences among four types of Indian leaders, shows that democratic leaders (Mean=23.08) do not differ from bureaucratic leaders (Mean=29.49); and both of these are significantly more authoritarian submissive than intellectual leaders (Mean=25.78) but less than religious leaders (Mean=31.92). Thus, these results chnfirm the first presumption.

Among five component sub-leaders of Indian religious leaders (Table No. 4), the Jains (Mean=32.30), the Buddhists (Mean=32.70) and Islamics (Mern=33.02) do

Table No. 4

Duncan's New Multiple Range Test applied to the differences among five component Sub-leaders of Indian Religious Leaders (N=50 in each case).*

Means	(1) Christ 24·80	(2) Jains 32·30	(3) Buddh 32·70	(4) Islam 33·02	(5) Hindus 36·60	Shortest Significant Range (p. .01).
Christ=24·80	——	7·50	7·98	8·22	11·80	R2=1·752
Jain=32·30	——	——	0·48	0·72	4·30	R3=1·825
Buddh=32·78	——	——	——	0·24	3·82	R4=1·876
Islam=33·02	——	——	——	——	3·58	R5=1·913
	Christ	Jains	Buddh	Islam	Hindus	

* Any two treatment Means not underscored by the same line are significantly different.

* Any two treatment Means underscored by the same line are not significantly different.

not differ from one another. However, these three are significantly higher than Christians Mean=24.80) but lower thanHindus (Mean=36.60). Hence, the presumption No. 2(a) is also retained.

In the case of five components of Indian intellectual leaders (Table No.5), the advocates (Mean=22.86) and scientists (Mean=23.40) have been found to be lower than

Table No. 5

Duncan's New Multiple Range Test applied to the differences among five component sub-leaders of Indian Intellectual leaders (N=50 in each case).*

Means.	(1) Adv. 22 86	(2) Sc. 23·40	(3) Edn. 26·42	(4) Art. 27·04	(5) Lit. 29·16	Shortest Significant Ranges (p. 01)
Adv=22·86	———	0·54	3·56	4·18	6·30	R2=1·752
Sc.=23·40	———	———	3·02	3·64	5·76	R3=1·825
Edn=26·42	———	———	———	0·62	2·14	R4=1·876
Art=27·04	———	———	———	———	2·12	R5=1·913
	Adv.	Sc.	Edn.	Art.	Lit.	

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their other counterparts on authoritarian submission; and these two do not differ from each other. Likewise, the educationists (Mean =26.42) do not differ from artist (Mean =27.34); however, both of these are significantly higher than advocates and scientists. The literatures (Mean = 29.16), on the other hand, are signiffcantly higher than all other intellectuals under comparison. These results, thus, confirm the presumption No. 2 (b).

The Duncan's New Multiple Rang Test (Table No. 6), as applied to the differences among five component sub-leaders of Indian bureaucratic ieaders, evidences that District Planning Officers (Mean = 30.20), Block Development Officers (Mean =31.54), and Municipal Executive Offibers (Mean = 31.84) do not differ fsam one

Table No. 6

Duncan's New Multiple Range Test applied to the differences among five component sub-leaders of Indian bureaucratic leaders (N=50 in each case).*

	(1) IAS	(2) PCS	(3) DPO	(4) BDO	(5) EOS	Shortest Significant
Means	25·49	28·06	30·20	31·54	31·84	Ranges (p .01)
IAS=25·49	————	2·57	4·71	6·05	6·35	R2=1·752
PCS=28·06	————	———	2·14	3·48	3·78	R3=1·825
DPO=30·20	————	——	———	1·34	1·64	R4=1·876
BDO=31·54	————	———	———	——	0·31	R5=1·913
	IAS	PCS	DPO	BDO	EOS	
			———————	———————	——	

* Any two treatment Means not underscored by the same line are significantly different.

* Any two treatment Means underscored by the same line are not significantly different.

another; and these three are significantaly higher than I. A. S. Officers (Mean = 25.49) and P.C.S. Oificers (Mean = 28.06) on authoritarian submission. Among latter two, the I. A. S. Officers are less submission toan the 1. C. S. Officers. Thus, the presumption No. 2(c) is also coufirmed.

Table No. 7

Duncan's New Multiple Range Test applied to the differences among five component sub-leaders of Indian democratic leaders (N=50 in each case).*

	(1) MBC	(2) DBC	(3) MP	(4) BPC	(5) MLA	Shortes Significant
Means	27·72	28·76	28·78	29·22	30·96	Range (p .01)
MBC=27·72	————	1·04	1·06	1·50	3·24	R2=1·752
DBC=28·76	————	———	0·02	0·46	2·20	R3=1·825
MP =28·78	————	———	———	0·44	2·18	R4=1·876
BPC=29·22	————	———	———	———	1·74	R5=1·913
	MBC	DBC	MP	BPC	MLA	
	———————————————			———————		

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With regards to the differences among five compnent sub-leaders of Indian democratic leaders, it is evident from Table No. 7 that the Members of Legislative Assemblies (Mean = 30.96) are significant more submissive than the Chairmen of Municipal Boards (Mean = 27.72), Chairmen of District Boards (Means = 28.76), and Members of Parliament (Mean = 28·78); the latter three, however, do not differ from one another. The Chairman of Block Panchayats (Mean = 29.23), being not different from any domocrat under comparison, show resemblance with all their counterparts on authoritarian submission. Hence, the presumption No. 2(d) is also ratained.

Regarding contribution of the Status of domicile of Indian leaders on their levels of authoritarian submission it can be seen from Table No. 8 that Indian leaders belon-

Table No. 8

Duncan's New Multiple Range Test applied to the differences among Indian leaders belonging to five different Statces of India (N=200 in each case).*

	(1) UP	(2) HAR	(3) RAJ.	(4) M.P.	(5) BIH	Shortest Significant Ranges (p .01)
Means	28·30	28·26	28·87	29·53	29·77	
PP=28·30	——	0·56	0·57	1·23	1·47	R2=0·875
Ha=28·86	——	——	0·01	0·67	0·91	R3=0·912
Ra=28·87	——	——	——	0·66	0·90	R4=0·937
MP=29·77	——	——	——	——	0·24	R5=0·956

U.P. HAR RAJ. M.P. BIH.

* Any two treatment Means not underscored by the same line are significantly different.

* Any two treatment Means underscored by the same line are not significantly different.

ging to Uttar Pradesh (Mean = 28.30) are significantly lower than those who belong to Madhya Pradesh (Mean = 29.53) and Bihar (Mean=29.77). Conversely, the Indian leaders belongieg to Bihar (Mean = 29.77) are significantly than those who belong to Uttar Pradesh (Mean = 28.30) and Haryana (Mean = 28.26); whereas,the Indian leaders belonging to Rajasthan (Mean = 28.87) do not differ from those of Haryana (Mean = 28.26) and Madhya Pradesh (Mean =29.53). Hence, the presumption No. 3 is also retained.

Duucan's New Multiple Rnnge Test (Table No. 9, 10, and 11), as applied to examine the differential effects of the States of domicile of Indian religious leaders (Table No. 9 : N. P.=31.19; Bihar = 31.38; M. P. = 31.74; Rajsthan = 32.22; Hatyana=

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32.36); Indian intellectual leaders (Table No. 10 : Bihar = 25.60; Rajsthan = 25.70; Madhya Pradesh = 25.82; Haryana = 25.84; Uttar Pradesh = 25.92;), and Indian bureaucratic leaners (Taele No. 11 : Rajsthan = 28.86; Uttar Pradesh 28.96; Haryana

Table No. 9

Duncan's New Multiple Range Test applied to the differences among Indian Religious leaders belonging to five different States of India (N=50 in each case).*

	(1) U.P.	(2) BIH.	(3) U.P.	(4) RAJ.	(5) HAR.	Shortest Significant
Means	31·19	31·38	31·74	32·22	32·36	Ranges (p 01)
M.P.=31·19	———	0·19	0·55	1·03	1·17	R2=1·752
BIH.=31·38	———	———	0·36	0·84	0·98	R3=1·825
U.P.=31·74	———	———	———	0·48	0·62	R4=1·876
RAJ.=32·22	———	———	———	———	0·14	R5=1·913
	U. P. ———	BIH. ———	U. P. ———	RAJ. ———	HAR. ———	

= 29.24; Madhya Pradesh = 30.18; Bihar = 30. 18), reveal that the levels of these three leaders are not differentially affected by the States of their domicile. Therefore, the presumption No. 4, 5, and 6 are rejected.

Table No. 10

Duncan's New Multiple Range Test applied to the differences among Indian Intellectual leaders belonging to five different States of India (N—50 in each case).*

	(1) BIH	(2) RAJ.	(3) M.P.	(4) HAR.	(5) U.P.	Shortest Significant
Means	25·60	25·70	25·82	25·84	25·92	Ranges (p .01)
BIH.=25·60	—	0·10	0·22	0·24	0·32	R2=1·725
RAJ.=25·70	—	—	0·12	0·14	0·22	R3=1·825
M.P.=25·82	—	—	—	0·02	0·10	R3=1·876
HAR.=25·84	—	—	—	—	0·08	R5=1·913
	BIH. ———	RAJ. ———	M.P. ———	HAR ———	U.P. ———	

* Any two treatment Means not underscored by the same line are significantly different.

* Any two treatment Means underscored by the same line are not significantly different.

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Table No. 11

Duncan's New Multiple Range Test applied to the differences among Indian bureaucratic leaders belonging to five different States of India (N=50 in each case).*

Means	(1) RAJ. 28·86	(2) U.P. 28·98	(3) HAR 22·24	(4) M.P. 30·18	(5) BIH 30·18	Shortest Significant Ranges (p .01)
RAJ.=28·86	—	0·12	0·38	1·32	1·32	R2=1·752
U.P. =28·98	—	—	0·26	1·20	1·20	R3=1·825
HAR.=29·24	—	—	—	0·98	0·98	R4=1·876
M.P. =30·18	—	—	—	—	0·00	R5=1·913
	RAJ.	U.P.	HAR.	M.P.	BIH.	

The democratic leaders belonging to Utter Pradesh (Mean =26.56) have been found to be significantly lower than those who belong to Rajasthan (Mean = 28.72) and Madhya Pradesh (Mean = 30.24), and Bihar (Mean= 31.92). Conversely, the Indian democrats belonging to Bihar (Mean =31.92) have been found to be higher than those who belong to Utter Pradesh (Mean = 26.56), Haryana (Mean = 28.00), and Rajsthan (Mean = 28.72). The democrats belonging to Rajsthan, however, do not differ from those of Haryana and Madhya Pradesh. Hence, the seventh and least presumption is accepted.

Table No. 12

Duncans's New Multiple Range Test applied to the differences among Indian Democratic leaders belonging to five different States of India (N=50 in each case).*

Means	(1) U.P. 26·56	(2) HAR. 28·00	(3) RAJ. 28·72	(4) M.P. 30·24	(6) IBH 31·92	Shortest Significant Ranges (p .01)
U.P.=56·56	—	1·44	2·16	3·35	5·36	R2=1·752
HAR.=28·00	—	—	0·72	2·24	3·92	R3=1·825
RAJ.=28·72	—	—	—	1·52	3·20	R4=1·876
M.P.=30·24	—	—	—	—	1·68	R5=1·913
	U.P.	HAR.	RAJ.	M.P,	BIH.	

* Any two treatment Means not underscored by the same line are significantly different.

* Any two treatment Means underscored by the same line are not significantly different.

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CONCLUSIONS

In the Light of foregoing results and discussion it is concluded that :

1. Indian leaders, as a group, are deviated towards positive direction or authoritarian submission.

2. The four types of Indian leaders differ from one another on authoritarian submission. The democratic leaders do not differ from bureaucratic leaders; both of these, however, are most submissive than intellectual leaders but less submissive than religious leaders.

3. Among five component sub-leaders of Indian religious leaders, the Jains, the Buddhists, and the Islamics do not differ from one another on authoritatian submission; these three, however , and lower than Hindus but higher than the Christians.

4. Among five component sub-leaders of Indian intellectual leaders, neither advocates differ from scientists nor do the educationists from artists; the letter two, however, are more submissive than the former two but less than the literateurs.

5. The District Planning Officers, the Block Dovelopment Officers, and the Municipal Executive Officers, among five component sub-leaders of Indian bureaucratic leaders, do not differ from one another on authoritarian submission, these three, however are more submissive than the I. A. S. and P. C. S. Officers. Among letter two, the I.A. S. Officers are less submissive than P. C. S. Officers.

6. The Members of Legislative Assemblies, among five compouent sub-leaders of Indian democractic leaders, are high than the Chairmen of Municipal Boards, Chairmen of District Board, and Members of Parliament on authoritarian submission; the letter three, however, do not differ from one another. The Chairmen of Block Panchayats, being not different from any democrat under comparison, seem to play a harmonious role among all their counterparts.

7. Indian leaders, as a group, show differential effects of their Status of domicile on their levels of authoritarian submision. The Indian leaders belonging to Utter Pradhesh are less submissive than those who belong to Madhya Pradesh and Bihar. Conversely, the Indian leaders belonging to Bihar ere more snbmissve than those who belong to Uttar Pradesh and Haryana. The Indian leaders belonging to Rajasthan, however, do not differ from those who belong to Haryana and Madhya Pradesh.

8. Among four types of Indian leaders, the religious, the intellectual, and the bureaucratic leaders are not differently affected by their Status of domicile. The democratic leaders belonging to Utter Pradesh are less authoritarian submissive than those who belong to Rajasthan, Madhya Pradesh, and Bihar; conversely, the democratic leaders belonging to Bihar are more submissive than those who belong to Rajsthan Haryana, and Utter Pradesh. The democrats belonging to Rajasthan do not differ from those of Haryana and Madhya Pradesh.

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BOOK REVIEW

CASTE & POLITICS IN INDIA EDUCATION

BY

S. OMPRAKASH

1986, NEW DELHI

DEEP & DEEP PUBLICATIONS

Caste, reservation, disadvantage, equal opportunity and constitutional provisions have been discussed in great length by experts as well as non-experts from various angles. Probably, present investigation is a major venture to analyze the educational, psychological and social problems of the socially disadvantaged students of I. I. T., Kanpur. The study included all the 80 socially disadvantaged students and 20% of the total number of students (160) of I.I.T., Kanpur. In a planned way five tools, especially developed and chosen for the purpose, were administered. The analysis was statistically profound and meaningful. In addition, case studies were also attempted. The study clearly shows that reservation and such like measures cannot guarantee academic or professional success. The suggestions and the implications deserve serious consideration for evolving practical strategies to create equality of opportunity in education for evolving practical strategies to create equality of opportunity in education and to reduce the growing gulf between the disadvantaged and the advantaged.

The book is well produced and ably documented and examplifies the deep in sight and dispassionate analytical ability of the author. It deserve to reach the hands and mind of all those who are working in the area of education.

—*Jitendra Mohan*
Chairman
Department of Psychology Punjab University Chandigarh-160014

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The Influence of Social Class and Sex on Primary School Children's Creative Thinking*

14/1/01 पुस्तकालय गुरुकुल कांगड़ी विश्वविद्यालय हरिद्वार

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An attempt was made to study the influence of social class and sex on the development of creative thinking in primary school children. Two socio-economic levels. High and Middle, were taken in the study. The sample consisted of 160 *children,* 80 (40 *boys and* 40 *girls*) *from each of the two social classes. The age range of the children was* 9-11 *years.*

Creative thinking was measured by Baqer Mehdi's Tests of Creative Thinking and SES by Kulshreshtha's Socio-economic Scale. A 2×2 *factorial design was used. The ANOVA results indicate that there is a significant difference between children of the two social classes on all factors of Creativity ; there are significant differences between the sexes and interaction effects on most of the factors of Creativity. There is a positive significant relationship between SES and Creativity and its factors. The results are discussed in the light of creativity theories and findings of other investigatorss.*

Men are all inventors sailing forth on a voyage of discovery.

(Emerson)

The future of our civilization-our survival-depends upon the quality of creative imagination of our next generation.

(Torrance, 1962)

INTRODUCTION :

Societies cannot be easily and radically changed by the human will according to plan, rather it is the creativity with which the members of a society are endowed that accounts for the internal dynamism of a society (Barron, 1969). Man's current degree of enlightment, vast production of material goods, can be traced in large part to the creative performance of individuals during the course of history-to mean's striving to improve knowledge, to conquer the unknown and to create new ideas and new useful things.

The concept of creativity was laid down by the well known historian Arnold Toynbee (1964) who declared that" to give a fair chance of potential, creativity is a matter of life

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and death for society. This is all important because the outstanding creative ability of a fairly small percentage of the population is mankind's ultimate capital assest...potential creative ability can be stratified, started and stultified by the prevalenee in society of adverse attitudes of mind and behaviour." To-day there is competition in the minds of all men and creativity is one of the most important factors which will determine the outcome of the competition.

Guilford and Maryfield (1960), Gatzel and Jackson (1962) and others have proposed that creativity is a distinct aspect of intellectual functioning which is practically independent of conventional intelligence but Kurtzman (1967) and Anastasi and Schaefer (1971) found a positive significant relationship between creativity and intelligence. Creativity is the capacity of persons to produce compositions, products or ideas of any sort, which are essentially new or novel and previously unknown to the producer. It can be imaginative activity or thought synthesis, where the product is not a mere summation. It may involve the forming of new patterns and combination of information derived from past experiences, and the transplanting of old relationships to new situations and may involve the generation of new correlates (Drevdahl, 1956). The definition of creativity differs from thinker (Morgan, 1953; Andrews, 1961) to thinker (Guilford, 1959; Torrance, 1966), from one discipline to another and creative experience itself differs among individuals. However, the major characteristics of creativity are : perception of details, attitude of inquiry, fluency of thought, concentration, Integration, flexibility and spontaneity, originality and Individuality, ability to analyse, abstract, synthesize, discern new implications, etc.

A common way of analyzing the society's influence on the development of a persons creativity involves considering an individual's social class. The definition of social class is controversial among sociologists and psychologists, but generally it means a group of people whose background education, occupations, and income are similar.

India is a vast country, with the majority of the population comprising of the middle-middle and lower classes. The achievement level and needs of the various classes vary. Since the future development of the country depends not only on children of the elite classes but also on children of the other classes, the present study is an attempt to find out the effect of socio-economic status and sex on the creative thinking of junior school children. Since thinking abilities are involved in both verbal and non-verbal tasks, in the present study both types of tasks were given to the students to assess their creative thinking.

METHODOLOGY

Sample :

The sample for the present study consisted of 160 students of the V class from two public schools of Delhi. One of the public schools (Modern School) has students from the High SES group and the other from the middle SES group (Abner Memorial School). of these 160 students, 80 were girls and 80 boys. 40 girls and 40 boys were selected from each socio-economic Status. The mean age of the students was 10 years 4 months,

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Tools of Measurement :

(1) Baqer Mehdi's Tests of Creative Thinking Non-verbal and Verbal tests of Creative thinking. (Picture Construction, Incomplete figures, consequences, Unusual Answers, New Relationships, Product Improvement) (Baqer Mehdi, 1973).

(2) Kulshrestha's Socio-Economic Status Scale (Form A) (Kulshrestha, 1975),

Procedure :

Rapport was established with the students by explaining to them the objectives of the study in brief and the need of their co-operation. The students were assured that their results will not be given to the school authorities but will be kept strictly confidential. The administration of the tests was carried out on groups consisting of 10-20 students on different days. The scoring of each scale was done according to the scoring procedure as given in the manual.

Results and Interpretation :

On the basis of SES scores (Kulshrestha's scale) children from the two public schools were divided into High and Middle Socio-Economic Status (SES) groups. Each SES group having an equal number of boys and girls. Thus four group were formed, viz., (1) High SES boys, (2) High SES girls, (3) Middle SES boys, and (4) Middle SES girls.

The dimensions of Creativity were analyzed in detail, viz., Composite Non-verbal/figural creativity and its factors; Originality and Elaboration; Composite Verbal Creativity and its four factors Fluency, Flexi bility, Originality and Elaboration; Composite Originality Comprising of scores of both figural orginality and verbal originality; Composite Elaboration, Comprising of scores of both figural and verbal Elaboration and Composite Creativity Comprising of all the scores of Figural and Verbal Creativity, to find out the effect, if any, of Socio-economic status and sex on the components of creativity.

The mean scores and Standard deviations of Bager Mehdi's tests of Creative Thinking are presented in Table 1 for composite Creativity and its dimensions for boys and girls of the High SES and middle SES groups.

Table—1

Means and Standard Deviations for Creativity and its factors in relation to Social Class and Sex.

Variables		*High SES*			*Middle SES*		*Total* (N=80)	
	Sex	*N*	*X*	*S.D.*	*X*	*S.D.*	*X.*	*S.D.*
Composite Non-Verbal Creativity	Boys	40	121·33	18·51	94·75	22·28	108·04	24·42
	Girls	40	128·13	17·78	101·73	24·80	44·93	25·29
	Total	80	124·73	18·47	98·24	23·83		

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Elaboration factor	Boys	40	55·05	12·79	41·37	11·81	48·21	14·08
	Girls	40	66·10	11·62	43·75	12·96	54·93	16·24
	Total	80	60·58	13·41	42·56	12·46		
Originality factor	Boys	40	66·28	10·10	53·38	12·23	59·83	12·94
	Girls	40	62·03	9·46	57·98	13·61	60·00	11·90
	Total	80	64·15	10·01	55·67	13·14		
Composite Verbal Creativity	Boys	40	127·25	37·35	94·50	45·73	110·88	44·84
	Girls	40	154·78	42·29	98·35	43·25	126·56	51·24
	Total	80	141·01	42·20	96·43	44·55		
Fluency factor	Boys	40	20·93	8·66	13·10	6·66	17·01	8·66
	Girls	40	24·28	7·90	15·08	7·81	19·68	9·10
	Total	80	22·60	8·46	14·09	7·32		
Flexibility factor	Boys	40	17·15	6·31	11·63	5·49	14·39	6·53
	Girls	40	19·20	5·54	13·32	6·28	16·26	6·61
	Total	80	18·18	6·02	12·48	5·96		
Originality factor	Boys	40	60·85	22·36	43·48	24·99	52·16	25·25
	Girls	40	75·92	24·62	44·55	23·54	60·24	28·74
	Total	80	68·39	24·69	44·01	24·28		
Elaboration factor	Boys	40	29·58	5·03	26·30	12·35	27·94	9·57
	Girls	40	35·38	12·01	25·40	9·14	30·39	11·78
	Total	80	32·48	9·65	25·85	10·87		
Composite Originality (Verbal+Non-Verbal)	Boys	40	127·13	22·99	96·95	31·60	112·04	31·48
	Girls	40	137·95	27·29	102·53	31·00	120·24	34·16
	Total	80	132·54	25·80	99·74	31·43		
Composite Elaboration (Verbal+Non-Verbal)	Boys	40	84·63	14·50	67·68	21·87	76·15	20·40
	Girls	40	101·48	19·84	69·15	20·67	85·31	25·91
	Total	80	93·05	19·31	68·41	21·29		
Composite Creativity (Verbal+Non-Verbal)	Boys	40	248·58	42·20	189·25	60·46	218·91	59·98
	Girls	40	282·90	47·59	200·08	60·29	241·49	68·30
	Total	80	265·74	48·14	194·66	60·62		

A 2×2 (2 SES groups × sex) factorial design was used for the analysis of data for finding the differences, if any, between : (1) children of the High SES group and the Middle SES group; (2) between boys and girls, (3) and the interaction effect of Socio-economic Status and Sex on Creativity and its factors, the summary of the ANOVA'S is presented in Table 2.

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Table-2

Showing the Summary of the two-way analysis of Variance for Creativity and its factors.

Source of Variance		Creativity Factors									Composite Creativity
		Composite Non-Verbal	Elaboration	Originality	Composite Verbal	Fluency	Flexibility	Originality	Elaboration	Composite Originality	Composite Elaboration	
A df=1 (S.E.S.)	MS	28063·50	12978	2873·02	79521·80	2898·50	1299·60	23765·62	1755·62	43033·59	24280·25	202056·22
	F	61·82*	83·51*	21·29	43·41*	46·56*	36·20*	40·57*	16·88*	51·91*	62·75*	69·52*
B df=1 (Sex)	MS	1897·50	1802·30	1·22	9843·90	283·55	140·62	2608·22	240·09	43033·59	3358·05	20389·22
	F	4·18**	11·60*	·01	5·37**	4·56**	3·92	4·45**	2·31	3·24	8·68*	7·01*
AXB df=1 (S.E.SX Sex)	MS	·33	752·57	783·25	5605·07	18·93	1·24	1960·02	448·92	2689·59	2363·93	5522·52
	F	·00	4·84**	5·80**	3·06	·30	·03	3·35	4·32**	·33	6·11**	1·90
Within Cell	df=156 MS	453·95	155·41	134·94	1831·83	62·25	35·90	585·75	103·99	829·04	386·94	2906·74

*=p<·01 level ; **=p<·05 level.

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Table 2 indicates that the F values are statistically significant ($P > \cdot 01$) under condition A for Composite Non-Verbal Creativity, Non-verbal Elaboration and Originality; Composite Verbal Creativity, Verbal factors of Fluency, Flexibility, Originality, and Elaboration; Composite Originality and Elaboration; and composite Creativity. This implies that the High SES group is significantly different from the Middle SES group on Creativity and all its dimensions, Children from the High SES group scored higher on composite creativity and its dimensions as compared to the children of the middle SES group.

Table 2 also reveals that under condition B, the F values are significant for composite Non-Verbal Creativity, and non-verbal Elaboration factor; Composite Verbal Creativity and its Factors of Fluency, Flexibility and Originality; Composite Elaboration factor and Composite Creativity. This means that there is a significant difference between the sexes on Composite Creativity and these dimensions of crertivity. But there are no significant differences between the sexes on figural Originality, verbal Elaboration and Composite Originality Factors. The Interaction effect ($A \times B$) is statistically significant for figural (Non-verbal) Elaboration and Originality, Verbal Elaboration and Composite Elaboration. This implies that Socio-economic Status in interaction with sex brings about differences in these dimensions of creativity and not in the others. Finally, the product moment correlation was computed between SES and Composite creativity and also between SES and all factors of creativity. The values of the Correlations between SES and Creativity and SES and all factors of creativity were found to be high and statistically significant ($p < .01$). The correlation between SES and Creativity factors is presented in Table 3.

Table-3

Relationship between social class and Creativity : Product moment correlation (N=160)

	Creativity Variables									Composite Creativity
	Non-Verbal Creativity Composite	Elaboration factor	Originality factor	Composite Verbalcretivity	Fluency factor	Flexibility	Originality	Elaboration factor	Composite Originality	Composite Elaboration	
Social Class (SES)	+·58*	+·63*	+·37*	+·59*	+·58*	+·56*	+·56*	+·41*	+·60	+·60*	+66*

*=p<·01 level ; **=p<·05 level.

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Discussion:

It was found that children of the High SES group differed significantly from children of the Middle SES group on Composite Non-Verbal or Figural creativity and its two factors of Elaboration and Originality. Children from the High SES groud obtained a higher mean score than children from the Middle SES group. The Non-verbal test of creative thinking was included in the present study with the sole purpose, that, if children of any SES group should find it difficult to put their ideas in words or language can show their thinking abilities in figural content where language is minimal. The Non-Verbal Test of Creative Thinking consists of Picture Construction Activity, Incomplete Figure Activity and Triangles and Ellipses Activity, and measures the subject's ability to deal with figural content in a creative manner. The subject uses his imagination to produce novel and uncommon responses, abstract but appropriate titles, new patterns or figures and the ability to add as many pertinent details as he thinks necessary to the minimum and primary response to the stimulus figure. It implies that children from the High SES group are more creative in dealing with figural content than children of the middle SES group.

It was found that children of the High SES group scored higher (mean score) on verbal creativity and its factors of Fluency, Flexibility, Originality, and Elaboration as compared to the Middle SES group. It implies that children of the high SES group are more creative, viz., use verbal responses which are relevant and unrepeated, are full of ideas, think of larger number of possibilities or consequences, have a larger number of shifts in thinking or thought categories or ability to produce a great variety of ideas, unusual responses, clever responses or remore associations, relationships and the ability to construct an object from a simple to a more complex one, than children of the Middle SES group. Children of the High SES group also scored higher on Composite Originality and Elaboration factors and Composite Creativity as compared to the Middle SES group.

The statistically significant and high correlations indicate that there is a positive relationship between SES and Creativity and SES and all factors of creativity. This implies that with increase in the SES the creative ability will also increase. However, there finding are at variance to the findings of Chadha and Sen (1981), who found no significant differences between : (1) high creative and low creative boys, (2) high creative and low creative girls, (3) high creative boys and girls and (4) low creative boys and girls on socio-economic status. Infact, they found no significant relationship between verbal creativity and SES ($r = \cdot 03$). This could be due to the fact that the entire sample was obtained from one reputed Delhi Administration School and there may not have been great variations in the socio-economic status of the subjects to show the effect of SES. Whereas, in the present study, children were especially selected from two socio-economic backgrounds and who were studying in schools with wide differences in educational curriculum, to find out the effect of SES and environment on Creativity and its factors. The environmental influences, direct or indirect, have a great role in developing creative abilities (Gowan, 1971 : Gupta, 1970-71). Empirical evidences indicate that family background, education of parents, social and intellectual bases in the family, Professional

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background and vocational independence of the parents, child-rearing practices, socio-economic condition of home, etc. have known to influence creativity of the child (Roe, 1953 : Weisberg & Springer, 1961 ; Shaefer & Anatasi, 1968 ; Gowan, 1971). The type of school in which the individual receives the training is also said to influence creativity (Haddon and Lytton, 1968 ; Lytton, 1971). Mowever, Shean (1979) found in a study that training in creative problem solving had a significant positive effect on divergent thinking, viz., on Fluency, Flexibility and Originality factors. Jarial (1980), also found a significant increase in the non-verbal scores of ninth grade students who were exposed to instructional material for 30 sessions in comparison to the controlled group who did not receive any treatment. This means that an enriched environment having greater degree of conceptualization and stimulation like reading material, Television, good educational and recreational curriculum, independence of ideas, more interaction with parents and significant others, encouragement and past success does effect creative thinking.

The statistically significant interaction effect on figural Elaboration shows that girls of the high SES group have more ability for adding details (more ideas) to stimulus figures as compared to the boys of the High SES group. The same trend is observed for the Middle SES group. However, as regards figural originality, boys of the High SES group show more ability for novel, uncommon and abstract responses as compared to girls of the High SES group. Girls, of the Middle SES group have more originality in their figural responses as compared to the boys of the same SES group.

The significant interation effect on verbal Elaboration factor and composite Elaboration shows that girls of the High SES have greater ability to construct more complex objects from simple ones as compared to boys of the same social class. However, the difference in the ability for elaboration between boys and girls of the Middle SES group is not significant. There is no significant difference between boys and girls of the same socio-economic status on other dimensions of creativity.

The findings show that girls have more (higher mean scores) creativity, both non-verbal and verbal, than boys. They also possess a greater ability for figural details (elaboration), and show more Fluency, flexibility and originality in their thinking when expressing it in language (writing). These findings also substantiate the findings of Yamamoto (1960) Solomon (1968), and Chadha and Ghose (1985), who found that females are more creative than males on all the components of Verbal creativity. The findings of this study are at variance with the findings of some investigators (Rawat & Aggarwal 1977 ; Raina, 1980 ; Chadha & Sen, 1981) who found either no significant sex differences, on creativity or found boys to have more creative thinking than girls. This could be due to the fact that probably the sample of these investigators consisted of boys and girls who were not provided with equally enriched environment or opportunities of environmental stimulation. This is the case in most middle SES and lower SES groups where boys are provided more opportunities and better educational environment than girls. In the present study also, there is no significant difference on most of the dimensions of creativity between the sexes in the Middle SES group. The difference between boys and girls is mainly because of the contribution of the girls of the High SES group who are more

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creative than boys of the same social class. However, on the figural originality factor, boys are better than the girls of the High SES group. The differences between the sexes could be due to cultural and environmental factors. Thus it seems creative performance of each sex is a function of the socio-economic that status (make-up) from which the respective samples are drawn.

The results of the present study, Viz., the effect of socio-economic status on creativity can be explained according to the Independence theory of creativity, which states that a non-authoritarian attitude of parents with no environmental constraints, plus a favourable climate and past success helps in developing creative thinking. The significant differences between the sexes can be explaned by the Motivational theory (Andrews, 1963) which states that both intrinsic and extrinsic motivations are associated with higher levels of creativity and higher proportion of creative responses. Motivation has been taken as a drive for competence (white, 1961), the desire to master the environment by developing knowledge and skills, Girls in the present day seem to have a stronger drive for competence than boys who have always been thought of as being competent and possessing a strong motivational drive.

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Effect of Level, Type of Management and Sex on Job-Satisfaction of Teachers

Dr. (Miss.) Sudesh Gakhar & Rakesh Sachdeva[2]

INTRODUCTION

The process of Education is being increasingly visualised as closely linked with productivity and national development. Nevertheless, this will be only partially accomplished in the absence of teachers who really identify themselves with their profession. Teacher's identification with the profession is mainly determined by the job-satisiaction they derive from it. Moreover investigation have shown that when a man is satisfied with his work, not only is he profited but the employer too gets its benefits. Job-satisfaction improves the performance as well as the effectiveness of a an individual irrespective of the nature of work. This is why the understanding of the Job-satisfaction requires a a serious consideration by all concerned.

Occupational status is related to but not identifical with Job-satisfaction. Chyris Argyris (1964) found that as one goes up in the occupational hierarchy, the job itself becomes challenging and provides mere opportunities for ego-satisfaction (Greater satisfaction of ego needs leads to greater Job-satisfaction). While these opportunities go on decreasing with the decline in occupational level. Prybil and Lawrence (1973) did not show any relationship between occupational level and Job-satisfaction. Bose (1976) explored the relationship between Job-satisfaction and occupational status in the banking profession of administering an employee's Job-satisfaction inventory to 50 1st grade banking officers and 50 clerks. Results indicate that status of Job and Job-satisfaction were positively correlated and that the two occupational groups differed significantly and in their levels of Job-satisfaction, with that of clerks being lower than that of officers. Voydanoff, Patricia (1978) analyzed the relationship between perceived Job characterisctics and Job-satisfaction among a national probability sample of 1, 533 workers in 5 occupational status groups. Multiple regression analyses were used to determine the relative importance of several perceived Job characteristics in relation to Job-satisfaction among workers in different occupational groups self-expression, role-strain and financial rewards were related to Job-satisfaction in all occupational groups although their relative importance varied among groups.

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Very little is known about the effect of type of management on Job-satisfaction of teachers. In India, there are schools controlled by different agencies, for example, government schools, privately recognized schools and these managed by different local bodies. Though, all teachers are governed by the same rules and service conditions, though the salary benefits etc. are supposed to be the same for all of them, irrespective of the management of the school in which they are working, it's very often felt that the working conditions, security of service, regularity of payment of salaries, benefits etc. of teachers working in private schools are in general barring a few exceptions compared to those in government school's. Porter and Steers (1973) found that employees react to the task performed and the more general milien in which they work rather than to task alone. Venkata Rami Reddy (1978) observed that teachers employed in private schools are more satisfied than these working in government and Zila Parishad Schools.

Zaleznik, Christensen and Roethlisberger (1958) investigated the relationship between sex and Job-satisfaction and found women more satisfied than men when women were receiving the same pay and also had the same social position as men. Huhlen (1963) found that occupation is psychologically more central to men than women. Hulin and Smith (1964) contend that it's not the sex, perse, that is related to high or low satisfaction, rather it is the entire constellation of factors which themselves relate to the sex such as pay, Job-level and promotional opportunities (Chase, 1951 ; NEA, 1959 ; Belsco and Alutto, 1972 ; Bemard and Kulandivel, 1976 ; Anand, 1977) found that women teachers are more satisfied than men teachers. Englhardt (1973) and Wearer (1977), however, reported no significant differences between Job-satisfaction of men and women teachers.

Hence , the present investigation is intended to find out the effect of level, type of management and sex on Job-satisfaction of teachers.

Hypotheses :

1. Significant differences exist in job-satisfaction among teachers belonging to primary, middle and secondary schools.
2. Significant differences exist in Job-satisfaction of government and private school teachers.
3. There are no sex-differences in job-satisfaction of teachers.
4. Significant differences in Job-satisfaction emerge due to simple iteraction between occupational level and type, type and sex and level and sex and interaction of second order involving level X type $\times$ sex.

Sample :

The sample is limited to only one city —Abohar. From among the list of government and recognised private schools, a random selection of schools was done. Out of these selected schools, teachers, were also draw randomly. Number of government and private school teachers, primary, middle and secondary level teachers was kept equal. This way a sample of 200 teachers was drawn.

Tools :

Srivastava's (1975) Job-satisfaction Scale.

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The choice fell in favour of selecting this Job-satisfaction inventory mainly because of its availability and suitability to measure Job-satisfaction. Additional reason for the preference of this inventory was that it has been standardised on cultural population very similar to the sample taken in the present study. This inventory consists of 14 statements. There are five response categories ranging from strongly agree to strongly disagree for each statement. The scoring was done according to Likert's technique.

This scale was administered on the whole sample which comprises of 200 teachers. They were asked to rate each and every statement. The score range was 1 to 5. One total score was obtained for the purpose of analysis.

Results and Discussion :

To test the IV hypothesis a $3\times2\times2$ pattern of analysis of variance was used involving (Level-primary, middle and secondary) type of institutions (government and private) and sex (male and female). First hypothesis states that significant differences in Job-satisfaction exist among teachers belonging to primary, middle and secondary levels. To verify the first hypothesis is *F*-ratio followed by mean scores were calculated. Cell wise mean scores and *F*-ratios have been entered in Table I for the main effect of level variable. Wherever *F*-ratio was significant, it was followed by *t*-ratio.

Table-1

Results of Analysis of Variance for Job-Satisfaction.

Source of Variance	*SS*	*df*	*MSQ*	*F-ratio*	*Signi-ficance*
Level	5750·660	2	2870·330	344·965	at ·05
Type	1045·440	1	1045·440	162·147	at ·05
Sex	294·690	2	294·690	42·887	N. S.
Level × Type	97·400	2	48·700	7·087	N. S.
Level × Sex	77·400	2	38·700	5·632	N. S.
Type × Sex	14·700	1	14·700	2·139	N. S.
Level × Type × Sex	1·710	2	0·885	0·124	N. S.

For level variable $F=344·965$ which is significant at ·05 level. To analyse further mean scores aad *t*-ratios were calculated to see the significant differences between primary and middle, middle, and secondary and primary and secondary level. Mean scores are 40·44, 43·80 and 53·45 for primary, middle, and secondary level respectively. *t*-ratios for primary & middle, middle & secondary and primary & secondary are 2.58, 3·50 and 4·8 respectively, value of 2·58 is significant only at ·05 level. So the conclusion derived from the above results is that significant differences exist among teachers belonging to primary, middle and secondary level and it becomes clear from the mean scores also that Job-satisfaction increases as the level increases. Higher Job-satisfaction at higher occupational level may be explained both in light of economic factors and Job-conditions. At higher level, salary increases and promotional opportunities are more. Job-conditions become

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more satisfying at higher level. Similar results were found by Chyris Argyris (1964) who found that Job becomes more interesting at higher level. As one goes up in the occupational hierarchy the Job itself becomes challenging and provides more opportunities for ego-satisfaction, while these opportunities go on decreasing with the decline in occupation at level. Maslow (1954) calls ego needs as higher order needs. It would not be wrong to say that one runs after ego-satisfactian. Since an individual is so conscious of the satisbaction of his ego-needs, it may be argued that is greater, is the satisfaction of ego-needs, greater will be the Job-satisfaction. These results lead to infer that Job-satisfaction increases with the increase in level. This study is consistent with the findings of Chyris Argyris (1964) and Centers, Birgental and Capwell (1957) who support higher the occupational level, higher the Job-satisfaction. Hence results lend support to the first hypothesis.

The second hypothesis is that "significant differences exist in job-satisfaction between government and private school teachers". To analyse this hypothesis, F-ratio followed by mean scores and *t*-ratio were calculated. *F*-ratio is 162.147 (singnificant at ·05 level). Mean scores for government and private school teachers are 49.84 and 44.40 respectively. The values have been entered in Table-II.

Table II

Showing t-Ratio of Government and Private school Teachers on Job-Satisfaction

Type	Mean	S. D.	SE_m	M_1-M_2	t-ratio
Government	49·84	·60	·36	5·44	5·91 (Significant at ·01 level)
Private	44·40	·69	·49		

t-ratio of 5·91, significant at ·01 level, indicates that signlficant differences exist between government and private school teachers. Government school teachers show greater Job-satisfaction in comparison to private school teachers. Results are to some extent self-explanatory. Government schools in Punjab are much better than private schools. In government schools teachers are well-paid, there is less of burden on their minds, there is more security of Job and teachers are given more facilities than private school teachers. This findings is contrary to the findings of Venkata Rami Reddy and Krishna Reddy (1978) who observed that private school teachers were more satisfied than government school teachers.

The third hypothesis is that "no sex differences exist in Job-satisfaction of teachers". To verify the hypothesis *F*-ratio was calculated. For the main effect of variable of sex, *F*-ratio is 42·887. This *F*-ratio is not significant. Mean scores are 45·51 and 38·46 for males and females respectively. Though these mean scores don't depart much from each other, yet the tendency of females being more satisfied is clear from the mean scores. These results are consistent with the findings of Chase (1951), NEA (1956), Belesco & Alutto (1972), Bernard and Kulandivel (1976) and Anand (1977) investigated the relationship between sex and Job-satisfaction and found that women teachers are more satisfied than men teachers. Englhardt (1973) and Weaver (1977). however, reported no

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significant difference between Job-satisfaction of men and women teachers. In the present study also the differences are not significant. Venkata Rami Reddy and Krishna Reddy (1978) found that women teachers are not "always" more satisfied than men teachers.

The fourth hypothesis is "significant differences emerge due to simple interaction of Level × Type × Type × Sex and Level × Sex and second order interaction of level × type sex". This hypothesis was developed to test interaction of level × type × sex but results though in expected direction did not lend support to the hypothesis because *F*-ratios have of interaction of level × type, type × sex and level × sex are foundin significant. The values already been entered in Table I. Significant *F*-ratios separately due to the effect of level and indicate their differential impact on Job-satisfaction which has been already discussed in first and second hypotheses.

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Aspiration and Value Preferences of Rural-Urban and Non-Gujarati teachers in making occupational Decisions of Secondary and College teachers.*

Dr. Thakorlal C. Mistry[1]

The striking differences in the preferential system of valuation of occupations of rural-urban and Non-Gujarati teachers observed by the author during the course of his study, the results of which not included in his theses, led him to investigate through one of his inventories (General) prepared for the occupational aspirations and expectations of teachers. The question as to whether there is any significant association between the levels of aspirations selected socio-economic status variables such as occupation of parents or guardians, residential identity etc., is of fundamental importance.

*Although Roe (1956) in her analysis of the psychology of occupations specified the ways in which needs gain a higher or lower place in a person's hierarchy, she did not out line how needs interact to make one kind of choice over another. Ginzberg etal (1951) in their investigation of the occupational choice, mainoin that the final choice of the career is dependent on a compromise between desires and opportunity (Ginzberg at al, 1951). However, neither the method of achieving this compromise nor adequate specification of the variables involved in predicting a person's optimal choice had been emphasized. One cannot deny that it is difficult to specify the methods of choice, especially in a country

*This study is an extension of the Ph. D. study of the author entitled "Need Achievement, job satisfaction, job involvement as a function of role stress, Locus of control and participation in academic climate. A study of college and secondary teachers——"A thesis submitted and awarded for his Ph. D. degree at Gujarat University, Ahmedabad.

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like India where people generally make vocational choices for irrational reasons such as (i) pecuniary incentives, (ii) parental pressure, (iii) Social prestige, (iv) social caste and economic systems, (v) influence of relatives and friends.

Method

For the purpose of this study, a random sample of 150 teachers from a group of 200 consisting of rural urban and non-gujarati students. The investigation was strictly confined to Ahmedabad teachers, India, from arts, science, commerce and engineering faculties. For the collection of data required for the analysis, a special inventory was prepared for the author's doctorate thesis in which certain extra items were inserted no included in the thesis, to solicit answers from the respondents.

Results and discussion

References and values

The occupational choices are governed more by subjective forces that influences significantly the value system of individuals (Bordin at. al, 1963). That is to say, the subjective or socio psychological factors that fundamentally govern the individuals final occupational choice are very similar to an iceberg : Visible portion of the behaviour of the individual are the objective or economic factors but concealed behind which are the pschic impulses like ocean waves which constantly intefere with his rational choices. More precisely, the subjective or socio-psychological factors comprise of such elements as aspirations, power, independence, leisure, esteem, security, social status or fame and satisfaction. The objective or economic factors are mainly means to gain command over material goods and services which reflect in the standard of living achieved. In other words, the pecuniary reward the individual gets for his input in the exchange is a mean, to his command over goods and sources. From the consumption of goods and servicess which in turn is not independent of the socio-economic environment in which he lives, he derives satisfaction.

Occupational Status and Pecuniary Earnings

Let us suppose an individual with a given total resources-endowment and knowledge of occupational alternatives is confronted with an occupational situation in which he has to choose between current earnings and occupational satisfaction.*

In figure—1, the level of current earnings is measured along the vertical ax is OX, and the level of occupational status or job satisfaction is shown on the horizontal ax is OX. While the earnings could be directly observed from the occupational choice, occupational status or job satisfaction, is a subjective element which cannot be directly

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*By total resources endowment at the disposal of an individual we mean human and non-human resources, such as Personality characteristics, acquired knowledge, skills and experience on the one hand and current financial work, borrowing capacity, family economic status on the other. The ranks has been determined by the relative scores (percent) obtained from rural, urban and non-gujarati teachers.

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observed. The latter lacuna has been over-come by soliciting answers to questionnaire from the respondents. The line AB is drawn on the assumption that the individual's choice should strictly confine to the area OAB, in a given total resource-endowment situation. The line AB which connects the axes OX and OY may be interpreted as the relative valuation ratio between current earnings and occupationl status which gives the individual command over goods and services and occupational status or job satisfaction. The indifference curve is drawn convex to its origin, implying that as one moves along the indifference curve to the right one get more of occupational status or job satisfaction and less of current earnings. The increase in occupational satisfaction diminishes the marginal utility of it, while the diminution in current earnings increases its marginal utility. On both grounds the individual's substitution of job satisfaction or earnings and vice-versa must lead him to an equilibrium or optimum position at which the marginal utility or job satisfaction and the marginal utility of current earnings are proportional. Thus, when the indifference curve is tangent to the AB line at the point D the individual maximizes his total satisfaction of current earnings and job satisfaction. The position at D is one at which the marginal rates of substitution of job satisfaction for current earnings and vice-versa are proportional and individual is in equilibrium or optimum position.

Occupational Choice Under Independent System

The above analysis is based on assumption that the occupational choice of the individual is independent of other individuals. In fact, the satisfaction which an individual gets from his occupational choice is not independent of other individuals with whom he comes into contact in the society. That is to say, the occupational cho ice of the individuals and the corresponding job satisfaction are interdependent. Given the relative position of the individual in the occupational ladder, the level of the occupational utility or job satisfaction is a function of a set of variables such as the level of current earnings, the rate of expected increase in earnings, stability of earnings, the amount of physical or mental exertion involved in the job activity (Hezberg et al. 1959). The evidence for interdependence of individual occupatinonal choice based on the aspirations in relation to occupation and education of parents or guardians and residential identity are well-brought in Table 1. Teacher's occupational Aspirations in Relation to Variables :

Variables	No. of Observations	Occupational Aspirations* High	Low
Occupational of parent			
Agriculture	N=80	58	42
Other	N=70	60	40
	N=150		
Education of parent			
SSC	N=86	63	37
Graduate	N=64	52	48
	N=150		

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Residential Identity			
Rural	50	17·8	12·4
Urban	50	16·4	15·6
Non-Gujarati	50	19·4	18·4
		53·6	46·4

*In percentage

The occupational aspirations of the teachers in relation to (i) occupation of parent, (ii) educationof parent, and (iii) residential identity, show three distinct patterns. It can be readily discerned from the Table 1 that teachers whose perents or guardians are agriculturalists have relatively high aspirations than their non-agriculturist counterparts. The observed difference is only a question of degree rather than kind, as the difference between them is as how as two percent.

Similarly, the teachers whose parents or guardians at the SSC level of education have relatively high aspirations than those whose parents or guardians at the graduate level of education. It is interesting to note that the lower the level of education the higher the level of aspiration ; but the reverse is not true. Here, the difference between low and high educational levels is as high as 11 percent.

The teachers whose residential identity is rural show relatively higher level of aspiration than those of urban but the difference is not perceptible. In contrast, the teachers whose residential indentity is non-gujarati show higher level of aspiration than their rural and urban counterparts. Here, again, the differences are only marginal not substantial.

The Most Preferred Occupation

The teachers most preferred occupation is one that he expects will give him the most of what he wants that is the one which maximizes his occupational total utility. If and when an individual chooses the occupation which maximizes his total satisfaction ofrutility, he will be indifferent between alternatives.

For the purpose o mapping out directly the occupational preferences of individuals we have solicited answers through questionnaires from the teachers.

The results of the fine most preferred occupations are presented in Table 2.

Table-2

Relative Occupational Preferences of Teachers*

Type of occupation	Rural	Urban	Non-Gujarati.
Medical Doctor	Low	High	Highest
Engineer	Low	High	Highest
Accountant	Low	High	Highest
Teacher	Highest	High	Low
Clerk	Highest	High	Low

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It can be seen from the Table 2 that for occupations such as medicine, engineering, and accountancy Non-Gujarati teachers reveal the highest, urban teachers high and rural teachers low preferences. In sharp contrast, for occupations such as teaching and clerical rural teachers reveal highest, urban teachers high and non-gujarati teachers low preferences. Our observation has unlocked the fact that these revealed occupational preferences are the result of the interactions of the three categories of the teachers. That is to say, the rural students emulate their urban counterparts, who, in turn, emulate the values and preferences of non-Gujarati teachers, who are the pace setters of preferences. All this means is that the occupational preferences are interdependent and not independent.

The ranks of the occupational preferences are presented in Figure 2. It can be readily discerned that the relative revealed occupational preferences of five alternatives fall under five sets of indifference curves. The clerical, the least preferred of all five occupations, corresponds to the indifference curve C_1. which is lower than the indifference curve C2 corresponding to backing. The high occupations such as medicine, enginering, accountancy in the descending order correspond to the indifferences curve to C5. C4, and C3.

Table-3

Factors influencing occupational preferences of Teachers.

Occupational values	Rural	Urban	Non-Gujarati
Security	Low	Highest	Low
Independence	Low	Highest	Low
Power	Low	Low	High
Esteem	Low	Low	High
Fame	Low	Low	High
Justice	Highest	High	Low
Easy work	Highest	High	Low
Profit	Low	High	Highest
Interesting work	High	Low	Highest
Leadership	High	Highest	Low
Social Service	Highest	Low	Low
Dependency	Low	Low	Low

*The ranks have been determined by the relative scores (per-cent) obtained for rural, urban and non-gujarati teachers.

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It can be seen from the table 3 that the 12 factors that influence the occupational preferences have different scores in relation to rural, urban and non-gujarati teachers. For the factors such as security and independence the scores are highest in the case of urban teachers and low for rural and non-gujarati teachers. The factors such as power, esteem and fame score high for non-gujrati teachers and low for rural and urban teachers. The factors such as justice, easy work and social services score highest for rural teachers, high for urban teachers and low for non-gujarati teachers. The factors such as profit and interesting work score highest for non-gujrati teachers high for urban teachers and low for rural teachers. The leadership factor scores highest for urban teachers. high for rural teachers and low for non-gujarati teachers. The social service factor figures highest in the case of rural teachers and high in the case of urban teachers and low in the case of non-gujarati teachers. The score for the dependency factor is uniformity low for all categories of teachers.

Conclusions :

The analysis of occupational choice, assuming that the individual has complete knowledge of alternatives available to him, has shown that he will prefer that occupation which will maximise the total satisfaction or utility at any given level of total resource-endowment situation. The analysis, however, cannot throw interesting high light on the inter-temporal shifts in the occupational preferences of individuals. Nevertheless, as a first approximation the indifference technique has interesting implications on the individuals occupational decision—making, given in rational behaviour. However, our findings show that there is no empirical basis whatsoever to suppose that the individual's occupational choice is independent of other individuals as postulated in the indifference map model. This observation is strengthened by the findings their not only the educational, occupational and residential identies of parents but also the interactions between individuals who have different socio-economic, cultural and residential backgrounds have important bearing on the occupational decision making.

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Attitude Towards Mental Retardation in Bangladesh

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SUMMARY

The purpose of the present study was to find out what people at present think, know, feel and believe about mental retardation. The general objective of the study was to examine whether urban and rural general public, and parents of mentally retarded and specialists differ in their attitude and knowledge regarding mental retardation.

A total of 240 subjects (specialist=80), general public=80, parents of mentally retarded=80) were selected by stratified random sampling. All the specialists were from urban area while one half, of the general public and parents of M. R. were from urban area and the other one half from rural area. Two semi-structured questionnaires : one for the specialists and general public and another for the parents of mentally retarded were developed on the basis of a pilot study conducted earlier on 60 subjects belonging to the same categories.

Results of the study indicated that the three categories of subjects (general public, specialist, and parents of M. R.) differed significantly in attitude and knowledge regarding definition, possible causes, rights and privileges, rituals, services and treatment, and legal rights of the mentally retarded. In almost all the areas, specialist group was found to be the most scientific in their ideas. It was interesting to note that parents of M. R. were more scientific in their knowledge and ideas than the general public. Furthermore, the results revealed that the general public and parents of the M. R. from urban area had more possitive attitude and awareness than that of the rural subjects.

I. INTRODUCTION

Considering WHO estimate of 3% as the incidence of mental retardation among world population, it could be estimated that 2·7 million people of Bangladesh were suffering from mental retardation in some form or the other. But no serious attempt has yet been made to identify these unfortunate individuals. Mental Retardation is a new topic of study for the people of Bangladesh. Only recently a few professionals were taking interest in educating and rehabilitating these handicapped individuals. According to the current scientific and professional view regarding definition "Mental Retardation refers to significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behaviour, and manifested during the developmental period" (AAMD, 1973, p11). In general sense, mental retardation is understood to be retardation in development which occurs before age 18 and it affects the individuals abilities to cope with the complexities of everyday life.

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A great deal has been reported and written about attitude towards mentally retarded at various time and places. In the Middle East, Hippocrates (460—377 B. C.), seems to have been among the earliest to separate the rehabilitation of disability from notions of magic and devil spirits (Mac Donald, 1981). Penrose (1972) notes the kindly attitude towards the mentally retarded persons in the writings of confucius (6th Century B.C.) and Zoroaster. With the rise of Christianity certain religious groups began to apply the philosophy of the brotherhood of man, and feed those among them who were mentally handicapped. It was not until the seventeenth century that society began to organize institutions for them (Johnson 1951).

Shakespeare (1975) and Thomas (1978) have reviewed a number of studies on attitude towards the disabled in the U.S.A. They concur in a uumber of points. Generally speaking, physical handicaps were more easily accepted than mental, and handicaps in children aroused less negative reaction than those in adults. It was also found that attitudes improved as socio-economic conditions improved. While narrating the present position of disability in economically backward countries of the world, Miles (1983) observed that until basic needs like food and shelter of the people were fulfilled it was difficult for them to develop altruistic feeling or to understand other people's sufferings. Very few studies have been conducted on attitudes towards the disabled in developing countries. Studies on attitudes toward mental retardation in Pakistan reflect negative attitudes such as fear, ridicule, avoidance by the general public and disregard for the disabled person (Abdullah, 1981 ; Ahmed, 1981) ; and Miles, 1979a, 1981a). The reasons advocated for such negative attitudes were mainly religion or superstition. Similar attitudes were also reported from various parts of Africa and Asia (WHO, 1982). Adhikari and Gudalefsky (1981) reports from Nepal that mentally retarded children and adults were neglected-in some villages people were sometimes hostile chasing them with dogs and throwing water on them; however, they further reported that in some cases the devine origin of disability was a matter requiring resignation and acceptance. It was also found in some studies (Serpell and N'gandu, 1981). that even where there was acceptance it might be merely a resigned and hopeless feeling or familiarity leading to neglect (Wall. 1972).

The situation, however, has been gradually changing. Because of concerted efforts of WHO, UNICEF, Government and non-governmental organizations (NGO) working, especially due to the impact of the "International Year of the Disabled" changes in attitude could be expected. In India-"Indian Federation for the welfare of the Mentally Retarded" which has country-based community programme has moved the parliament for a separate legislation to safeguard the rights of the mentally retarded (Pai, 1981). Similar steps have also been taken in Indonesia, Malaysia, Phillipines, Taiwan, South Korea and Thai land.

Mental Retardation, however, constitute a special problem in Bangladesh. Poverty,malnutrition, child mortality inadequate preventive and curative health services all influence the incidence and prevalence of mental retardation. Some steps have been taken by NGOS. especially a parent organization to make the public aware of the situation. Unfortunately, the policy makers were still apathetic towards the problem. No studies have been done on attitudes towards the disabled in this country.

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The purpose of the present study was to find out what people at present think, know feel and believe about mental retardation. Information collected through the present study would be helpful in developing programmes and services for the mentally retarded. Furthermore an epidemeological study on this problem could also be developed

The general objective of the present study was to investigate whether ordinary members of the public, parents of mentally retarded and specialists differed in their attitude towards and knowledge regarding mental retardation. Further it was also investigated whether urban and rural population differed in the same attitudes.

In the light of the general objecttve the following specificavriables regarding mental retardaticn were studied :

(i) Knowledge regarding definition of mental retardation.
(ii) Knowledge regarding causes of mental retardation.
(iii) Attitude towards religious and social rituals of mentally retarded,
(iv) Attitude towards rights and privileges of the mentally retarded.
(v) Knowledge regarding services and treatment of the mentally retarded.
(vi) Knowledge regarding legal rights of the mentally retarded.

II. METHOD

Subject : Three categories of subjects were included in the present study : general public, specialists and parents mentally retarded. A total of 60 of subjects represented the pilot study taking 20 from each category. The main study included 240 subjects' taking 80 from each category of general public, specialists and parents of mentally retarded. The subjects were selected by stratified random sampling. Of the 80 subjects from general public 40 were from urban area and another 40 from rural area. And of the 80 subjects from the parents of M.R. 48 were from the urban area while 32 were from the rural area. All the 80 specialists were from the urban area.The urban subjects of the general public were drawn randomly from two densely populated areas of Dhaka City—Hatkhola Road and High court area, while the rural subjeets were drawn randomly from—villages of Baghabari, Nolam and Khejutta of Savar Upazilla. The specialists were selected from Dhaka Shishu Hospital, Dhaka Medical College Hospital, Model Clinic of Mohammadpur, Deptts of Social Welfare, Psychology, and Education of Dhaka University, special education schools, primary and secondary schools of Dhaka city. The parents of mentally retarded in urban area came from various areas of Dhaka city, especially were the parents whose children were attending a special school "Kalyani". All the parents of M.R, from the rural area were selected from different villages of Dhamrai Upazilla—especially were the parents whose children were attending a special school. Tables 1, 2 and3 give the description of the subjects regarding age, sex. education and socio-economic status of the three categories of subjects.

TABLE—1

Age, sex, education and socio-economic status of subjects from general public in urban & rural area.

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Total number=80

		Urban (*N*=40) Male	Female	*Rural* (*N*=40) Male	Female
AGE	Below—20	3	0	0	4
	21—30	6	2	0	12
	31—40	6	6	5	7
	41 and above	2	5	5	7
EDUCATION	Illiterate	0	1	6	26
	Primary	1	0	2	1
	S.S.C. & H.S.C	5	4	2	3
	Graduate & above	11	8	0	0
SOCIO—ECONOMIC STATUS	Lower SES	3	1	6	30
	Middle SES	15	10	2	2
	Middle Higher SES	7	3	0	0
	Higher SES	1	0	0	0

Table-2

Distribution of subjects according to the area of specialization of the Specialists.

DIFFERENT SPECIALIZATION

	General Physician	Gyneacologist	Paediatrician	Psychiatrist	Psychologist	Educationist	Teacher of secondary School	Teacher of Primary School	Teacher of Special Edun.	Social Worker
SEX Male	9	0	3	2	3	3	7	6	0	4
SEX Female	1	5	5	3	5	3	5	5	5	6
Total :	10	5	8	5	8	6	12	11	5	10

Grand Total : 80

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Table-3

Age of mother at birth of handicapped child, education and socio—economic status of urban and rural parents of mentally handicapped children

		Urban (N=48)	Rural (N=32)
AGE AT BIRTH OF HANDICAPPED CHILD	15—25	23	23
	26—35	20	7
	36—45	5	2
	45 and above	0	0
EDUCATION	Illiterate	0	22
	Primary	8	9
	Secondary and Higher Secondary	28	1
	Graduate and above	12	0
SOCIO—ECONOMIC STATUS	Lower SES	10	28
	Middle SES	23	4
	Middle—Higher SES	15	0
	Higher SES	0	0

Measures Used; A pilot study was conducted to develop the questionnaires for identifying different attitude towards mental retardation. Initially two separate open-ended questionnaires were constructed : one for the general public and specialists, and another for the parents of mentally retarded. The questionnaires included items on subjects' attitude and knowledge about definition, causes, rights and privileges, religious and social rituals, care and treatment facilities and legal rights of the mentally retarded. The responses obtained by the pilot study were analyzed and, in some cases were classified into various categories, such as, scientific, semi-scientific, unscientific and grossly superstitous. Based on these responses two semi-structured questionnaires were developed on the same

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topics for the main study. Questionnaire for the parents of M. R. had 22 items while the questionnaire for the general public and the specilist had 17 items each devided into 6 sections. The items in each section measured the six variables mentioned earlier in the objectives. Personal Data Blank was also used for obtaining demographic data of the subjects.

Procedure : Four interviewers who had M. Sc. degree in Psychology were trained regarding mental retardation and each aspects of the questionnaires and how to administer these. Both the questionnaires were administered on the subjects from the general public and the parents of mentally retarded in interview sessions. Only the specialists filled in the qustionnaire themselves. The interviewers visited the subjects in their homes to administer the questionnaires for the general public and the parents of the mentally retarded in the urban as well as the rural areas. The specialists, however, were contacted in the Hospitals, Universities and Schools, and were requested to fill in the personal data blank and the questionnaire. All the subjects co-operated. Wherever the questions seemed to be difficult for the subjects to understand it was explained by the interviewers. The data were collected for a period of one year starting from middle of 1983.

III RESULTS

Data collected by administering both the questionnaires were classified and statistically analyzed. The following tables give the results of the analysis. Table 4 gives the distribution of responses by the specialists, general public and parents of N. R. regarding definition of mental retardation as scientific, semiscientific, unscientific, grossly superstitious or not stated. The x^2 computed revealed significant difference among the three groups of subjects and their responses at $p<.001$ level. Table 5 and Table 6 give the distribution of responses by the urban and rural parents of M.R. and urban and rural general public respectively regarding the same item i. e. definition of mental retardation. Urban and rural parents did not differ significantly but there was a significant difference at $p<.001$ level among the rural and urban general public regarding definition. Table 7 give the x^2 computed between the three groups : specialists, general public and parents of M. R. regarding beliefs about pregnancy, delivery and post-natal period as possible causes of mental retardation. All the three x^2 were significant at $p<.001$ level. Table 8 give the distribution of general public, parents of M. R. and specialists according to their views regarding possible causes of mental retardation — the responses were, however, not mutually exclusive. Table 9 give the distribution of responses of specialists, general public and parents of M. R. regarding participation of mentally retarded in social and religious rituals. x^2 computed revealed significant difference at $p<.001$ level among the three groups of subjects. Table 10 give the distribution of responses of parents of M. R. (rural and urban) regarding reasons for including their retarded children in social events. Table 11 give the distribution of responses of parents of M. R. (rural and urban) regarding their views about 'Right to Inheritence' of the mentally retarded. Table 12 give the distribution of responses of specialists and general public regarding their views about Right to Education' of the mentally retarded. x^2 computed revealed significant differences at $p<.001$ level. Table 13 give the distribution of responses of general public, parents of M. R. and specialists regarding their knowledge about different types of professionals

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required for the treatment of mentally retarded. The responses were not mutually exclusive. Table 14 give the distribution of responses of specialists, general public and parents of M. R. regarding their views about persons and institutions responsible for taking care of the mentally retarded. The responses were not mutually exclusive. And finally table 15 give the distribution of responses of specialists, general public and parents of M. R. regarding their awareness about existing laws of the country for mentally retarded. x^2 computed revealed signicant difference at $p<.001$ level among the three groups of subjects. (Tables 4 to 15 given in the Appendix).

IV. DISCUSSION

The results of the peresent study indicated significant differences in attitude towards and knowledge about mental retardation among general public, specialists and parents of mentally retarded regarding definition, possible causes, rights and previleges, religious and social rituals, services and treatment, and legal rights of the mentally retarded. The specialist group was fonnd to be the most scientific in their ideas, were most aware and had positive attitude towards the problems of mental retardation as compared to general public and parents of M. R. However when the perents of M. R. were compared to the general public the parent group was found to bc more scientific and aware of the problem of mental retardation than the general public.

(i) Definition : In response to the structured question on definition of mental retardation, compution of Chi^2 revealed a significant difference in responses of the three group of subject at $p < \cdot001$ level (Table—4), The result indicated 70% of the specialists, 37·5% of the general public and 43·75% of the parents gave a scientific answer. 2·5% of the specialist, 7·5% of the general public and 1·25% of the parents of M. R. gave a response which was grossly superstitious—indicating more awareness on the part of the parents (Table—4). Majority of the parents of M. R. in the present study had their children enrolled in the special education school which might have influenced their attitude When the respnses of rural and urban parents of M. R. were compared there was no significant difference, although the urban parents gave more scientific responses (Table-5), There was, however, a significant difference at $p<\cdot001$ level when the responses of rural and urban general public were compared the urban subjects were much more scientific in their responses (Table-6), Another important observation was that 12·5% of rural population gave grossly superstitious answers while 45% did not respond at all. If we look into the educational and socio economic level of the general public from rural area—they were mostly illiterats or less educated and poor. And therefore, such responses would be exepected.

(ii) Causes : In responce to questions on pregnancy, delivery and post—natal period as possible causes of mental retardation Chi^2 computations revealed significant difference among the three groups and their responses at $p < \cdot001$ level (Table—7). The specialist group had the highest frequency of responses supporting that pregnancy, delivery and post-natal period could be possible causes of mental retardation. Responses to another structured question regarding what were the possible causes of mental retardation, the three groups of subjects differed among them-selves (Table—8). There were 10 possible

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answers and the subjects could give multiple answers. Interesting to note was 85% of the rural general public responded as 'Curse from God' and 10% as 'sins of ancestors' as possible cause of M.R. 31% rural parents also responded 'curse from God' and 9% as 'sins of ancestors' as possible causes of M. R. On the other hand, urban general public and urban parents were more scientific in their responses (Table—8). This indicated that people in rural areas have less knowledge about mental retardation.

(iii) **Participation in social and Religios and rights and previleges** : Responses to questions on whether a mentally handicapped child should be allowed to participate in various social and religious ceremonies such as — akika (christening), Khatna (circumsition), birth day, upanayan, annaprashan etc. the three groups of subjects differed significantly at $p < .001$ level. 100% specialist, 88·75% general public and 62·5% parents of M. R. supported the participation of M. R. in all the ceremonies (Table—9). When the parents were asked the reason for inclusion of their M. R. child in social events (open ended question), they gave different reasons (Table—10), although a high percentage of parents did not respond. When the parents were asked whether they Would make their mentally retarded child have equal "right to inheritence" as their normal children (open ended) most of the parents responded in the affirmative giving reasons while 20 urban and 18 rural parents made no responses (Table-11). $(Chi)^2$ revealed a significant difference at $p < .001$ level between responses made by specialist and general public to the question on whether a mentally retarded child has the "right to education". 97% specialists and 66% general public supported the issue (Table—12).

(iv) **Treatment and Care** : Responses to question to the three groups of subjects regarding their views as to who were the specialists required for the treatment of the mentally retarded (structured question), the subjects differed among themselves. Highest percentage among specialists (78%) thought the psychiatrist had the responsibility of treatment of M. R., highest percentage among the parents (rural and urban—75%) gave this responsibility to the psychologist, while highest percentage among the general public (rural and urban—80%) said the child specialist (Paediatrician) were responsible for the care and treatment of M. R. (Table 13). Responses, however, were not mutually exclusive as multiple answers could be given. Responses to the questions as to the persons and institutions who should take care of the mentally retarded (structured question), almost all the three groups of subjects gave this responsibility to the parents. Specialist gave (77%) this responsibility also to the doctors, teachers and the Government (Table 14).

(v) **Legal Aspect** : There was a significant difference in $(Chi)^2$ at $p < .001$ level in the responses of the three groups of subjects regarding their knowledge about any existing laws of the country for the mentally retarded (Table-15). 100% parents had negative response, very few specialists (7%) and 32% general public responsed as having knowledge regarding laws for the mentally retarded. A large percentage, however, did not respond at all. From the results obtained in the parent study it could be commented that although significant differerences existed among specialists, general public and parents of mentally retarded regarding their attitude and knowledge about mental retardation, it was encouraging to note that parents of M. R. and the general public were also highly aware

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of various problems of mental retardation. Awareness might not be as high as the specialists, but the parents and general public had considerable knowledge about mental retardation. It was especially encouraging to learn that parents of M. R., even in the rural area, to some extent, were aware of the problem. The present study although with a small sample gives a different picture of attitude towards mental retardation as compared to the negative attitudes which existed in Nepal, Pakistan and some countries. Africa as revealed through various studies (Adhikari & Gudalefsky, 1981, Serpell and Nagda 1981 Miles, 1981).

The positive attitude of the specialists, and the parents of mentally retarded as revealed by the present study could be the result of the NGO's working for last 7/8 years in thie areas, holding conferences and seminars for awareness compaign regarding mental rctardation. Some ground has been prepared-work and services need to be developed.

Finally it could be said that the sample of subjects for the present study was rather small and before launching an extensive programme more studies especially an epidemeological study on mental retardation need to be conducted.

Table—4

Distribution of SS accroding to categroies of respondents and Scientific status of responses regarding definition of Mental Retardation.

NATURE OF RESPONSES

CATEGORIES OF RESPONDENTS	Scientific	Semi Scientific	Unscientific	Grossly Superstitious	Not Stated	Row Total
Specialists	56 70 46·28	15 18·75 27·77	7 8·75 21·21	2 2·5 22·22	0 0 0	80
Members of General Public	30 37·5 24·79	11 13·75 20·37	13 16·25 39·39	6 7:5 66·66	20 25 86·95	80
Parents of Mentally Retarded	35 43·75 28·92	28 35 51·85	13 16·25 39·39	1 1·25 11·11	3 3·75 13·04	80
Col. Total	121	54	33	9	23	240

Chi-Square between categories of respondents and scientific status of responses Chi^2=52·40, significant at p ∠·001 with df=8):

First figure in the cell indicate frequency.

Second figure in the cell indicate row percentage.

Third figure in the cell indicate colum percentage.

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Table-5

Distribution of rural and urban parents of M. R. according to scientific status of responses regarding difinition Mental Retardation.

		NATURE OF RESPONSES					
		Scientific	Semi Scientific	Un-Scientific	Grossly Superstitious	Not Stated	Row Total
LOCATION	Urban	21 (43·75) (60)	18 (37·5) (64·28)	8 (16·66) (61·53)	1 (2·08) (61·53)	0 (0) (0)	48
	Rural	14 (43·75) (40·00)	10 (31·25) (35·71)	5 (15·63) (38·40)	0 (0) (0)	3 (91·37) (100)	32
	Col. Total	35	28	13	1	3	80

Chi-square between categories of responses and scientific status of responses (Chi^2=3·307, not significant).

1st figure in the cell indicate frequency.

2nd figure in the cell indicate row percentage.

3rd figure in the cell indicate colum percentagee.

Table-6

Distribution of Rural and Urban general public according to categories of res. ponse and scientific status of response regarding definition of mental Retardation.

		NATURE OF RESPONSE					
		Scientific	Semi-Scientific	Un-Scientific	Grossly Superstitious	Not Stated	Row total
LOCATION	Rural	7 (17·5) (23·33)	4 (10) (36·36)	6 (15) (46·15)	5 (12·5) (83·33)	18 (45) (90)	40
	Urban	23 (57·5) (76·66)	7 (17·5) (63·63)	7 (17·5) (53·84)	1 (2·5) (16·66)	2 (5) (10)	40
	Col. Total	30	11	13	6	20	80

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Chi-square below categories of response and scientific status of response (X^2= 22·228, significant at p ∠·001 with df=5)

1st figure in the cell indicate frequency.
2nd figure in the cell indicate row percentage,
3rd figure in the cell indicate colum percentage,

Table—7

$(Chi)^2$ between nature of responses and categories of respondents regarding belief about possible cause of Mental Retardation.

$(Chi)^2$ between nature of responses and categorses of respondent	Value of X^2 (Urban-rural combined)
$(Chi)^2$ between nature of response and categories of respondent regarding pregnancy as a possible cause of M. R.	38.75*
$(Chi)^2$ between nature of response and categories of respondent regarding delivery as a possible cause of M. R.	43.97*
$(Chi)^2$ between nature of responses and categories of respondent regarding post-natal condition as a possible cause of M. R.	23.66*

*$(Chi)^2$ is significant at p ∠·001 with df=4

N. B. : Categories of respondents were specialists, general public and parents of M. R.
Response categories were : 'Yes' 'No', 'Not Stated'

Table-8

Distribution of respondents according to their views regarding possible cause of mental retardation.

CATEGORIES OF RESPONDENT AND THEIR LOCATION

	General Public N-80		*Parents of Mentally Retarded* N-80		*Specialists* N-80
	Urban N-40	Rural N-40	Urban N-4	Rural N-32	Urban
1. Harmful drug during pregnancy	22 (55)	3 (7·5)	24 (50)	2 (6·25)	64 (80)
2. Abnormal development	21 (52·5)	1 (2·5)	30 (62·5)	4 (12·5)	62 (77·5)
3. Abnormal birth	14 (35)	1 (2·5)	24 (50)	3 (9·38)	54 (67·5)
4. Heredity	9 (22·5)	3 (7·5)	8 (16·67)	3 (9·38)	53 (66·25)

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POSSIBLE CAUSES OF						
5.	Malnutrition	15 (37·5)	2 (5)	3 (6·25)	8 (25)	40 (50)
6.	Consanguinity	5 (12·5)	1 (2·5)	5 (10·42)	4 (12·5)	35 (43·75)
7.	Poverty	8 (20)	1 (2·5)	3 (6·25)	3 (9·38)	16 (20)
8.	Illitracy	10 (25)	1 (2·5)	2 (4·17)	0	12 (15)
9.	Curse from God	3 (7·5)	34 (85)	1 (2·08)	10 (31·25)	2 (2·5)
10.	Sins of Ancestors	0	4 (10)	0	3 (9·38)	0

Number within parentheses indicate percentage.

N. B. : Percentage would not add upto 100 as responses were not mutually exclusive.

Table-9

Distribution of SS according to categories of respondents and nature of responses regarding Performance of Social and religious rituals for MR children.

CATEGORIES OF RESPONDENTS	NATURE OF RESPONSES			
	Yes	*No*	*Not stated*	*Row Total*
Specialist	80 (100) (39·80)	0 (0) (0)	0 (0) (0)	80
General Public	71 (88.75) (35.32)	4 (5) (16.67)	5 (6.25) (33.33)	80
Parents of M.R.	50 (62·5) (24.88)	20 (25) (83·33)	10 (12·5) (66.67)	80
Col· Total :	201	24	15	240

Chi-square between categories of respondents and nature of responses on performance of Social and relegious rituals of M.R. ($Chi^2 = 45{\cdot}27$ significant at $P < {\cdot}001$ with df=4)

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lst figure in the cell indicate frequency, 2nd figure in the cell indicate row percentage 3rd figure in the cell indicate colum percentage.

Table-10

Distribution of parents according to their veiws regarding reasons for inclusion of the M.R. child in social events.

REASONS FOR INCLUSION OF M·R· CHILD IN SOCIAL EVENTS	PARENTS OF M.R. AND THEIR LOCATION	
	Urban (*N*=48)	*Rural* (*N*=32)
1. Participation in social gatherings provide learning opportuni—ties for the mentally handicapped.	4 (8·33)	3 (9·38)
2. Cannot leave the child alone	4 (8·33)	4 (12·50)
3· Does not create problem for others in a social gathering	5 (10·42)	1 (3·12)
4. Loves to go out anywhere and enjoys.	5 (10·42)	0
5. Not stated	27 (56·25)	24 (75)

Number within parenthesis indicate percentage.

Table-11

Distribution of parents of M.R. according to their views regarding "Right to Inheritance of M.R. like their normal children.

REASON FOR "RIGHT TO INHERITENCE"	PARENT OF M.R. AND THEIR LOCATION	
	Urban (*N*=48)	*Rural* (*N*=32)
1. They are entitled to equal inheritance rights just as other children of the family.	6 (12.50)	5 (15.63)
2. In case they are not able to work in later life, thay can get their livelihood from their inherited properties.	22 (45·83)	9 (28·13)
3. Not stated	20 (41-67)	18 (56·25)

Number in the parenthesis indicate percentage.

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Table-12

Distribution of responses of general public and specialists according to their views on "right to education" of parents of M. R.

CATEGORIES OF RESPONDENTS	NATURE OF RESPONSES (Rights to Education)			
	Yes	*No*	*Not Stated*	*Row Total*
Specialist	78 (97.5) (59·54)	2 (2.5) (10)	0 (0) (0)	80
General Public	53 (66·25) (40·46)	18 (22·5) (90)	9 (11·25) (100)	80
Col. Total	131	20	9	160

Chi-square between categories of respondents and their responses on "right to education" of M. R. Child ($Chi^2=26.57$) significant at $P<.001$ with df=2)
First figure in the cell indicate frequency
Second figure in the cell indicate row percentage
Third figure in the cell indicate colum percentage

Table-13

Distribution of respondents according to their knowledge regarding different Type of professionals required for the treatment of M. R.

TYPES OF PROFESSIONALS	CATEGORIES OF RESPONDENTS AND THEIR LOCATION				
	General Public N=80		*Parents of Mentally Retarded* N=80		*Specialists* N=80
	Urban N=40	Rural N=40	Urban N=48	Rural N=32	Urban
1. Psychiatrists	23 (57·5)	1 (2·5)	16 (33·33)	4 (12·5)	63 (78·75)
2 Psychologists	20 (50)	0 0	29 (60·42)	5 (15·63)	58 (72·5)
3. Child Specialists	28 (70)	4 (10)	17 (35·42)	7 (21·88)	49 (61·25)
4. Doctors	14 (35)	9 (22·5)	14 (29·17)	15 (46·88)	30 (37·5)
5. Homeopaths	4 (10)	2 (5)	1 (2·08)	1 (3·13)	5 (6·25)
6. Priests	5 (12·5)	6 (15)	1 (2·08)	1 (3·13)	5 (6·25)
7. Kaviraj, Hekim	3 (7·5)	5 (12·5)	0 0	1 (3·13)	4 (5)
8. Do not know	6 (15)	24 (60)		4 (12·5)	8 (10)

N. B. Number within parenthesis indicate percentage.
Percentages would not add up to 100 as the responses were not mutually exclusive.

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Table-14

Distribution of respondents according to their views regarding the persons or institutions taking care of the M.R. Children.

PERSONS & INSTITUTIONS TAKING CARE OF M.R.	CATEGORIES OF RESPONDENTS AND THEIR LOCATION				
	General Public		*Parents of M.R.*		*Specialists*
	Urban N=40	Rural N=40	Urban N=48	Rural N=32	N=80
1. Mother, father	35 (87·5)	36 (90)	48 (100)	31 (96·88)	77 (96·25)
2. Members of the family	(29 72·5)	12 (30)	26 (54·17)	6 (18·75)	62 (77·5)
3. Doctors	16 (40)	4 (10)	10 (20·83)	5 (15·63)	61 ‘76·25‘
4. Teachers	13 (32·5)	13 (32·5)	3 (6·25)	1 (3·13)	60 (75)
5. Society	21 (52·5)	14 (35)	1 (2·08)	2 (6·25)	57 (71·25)
6. Government	18 (45)	12 (30)	1 (2·08)	3 (9·38)	55 (68·75)
7. Relatives	12 (30)	9 (22·5)	11 (22·92)	5 (15·63)	31 (38·75)
8. God	1 (5)	1 (2·5)	0 0	1 (3·12)	6 (7·5)
9. No body	0 0	0 0	0 0	0 0	0 0
10. Do not know	0 0	(4 10)	0 0	0 0	0 0

N. B. Number within parentheses indicate percentage

Percentages would not add up to 100 as the responses were not mutually exclusive

Table-15

Distribution of SS according to their awareness regarding existing laws of the country for MR children.

CATEGORIES OF RESPONDENTS	NATURE OF RESPONSES			
	Yes	*No*	*Not stated*	*Row Total*
Specialists	6 (7·5) (18·75)	40 (50) (43·01)	34 (42·5) (29·57)	80
General Public	26 (32·5) (81·25)	8 (10) (8·60)	46 (57·5) (40)	80
Parents of M.R.	0 (0) (0)	45 (56·25) (48·39)	35 (43·75) (30·43)	80
Col. Total :	32	93	115	240

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Chi-square between categories of respondents and their responses ($x^2=46{\cdot}02$ significant $p<{\cdot}001$ with df=4)

1 st figure in the cell indicate frequency, 2 nd figure in the cell indicate row percentage 3 rd figure in the cell indicate colum percentage

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Personality Matrutiy and Risk Taking Behaviour

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The study was conducted to highlight the relatinship between personality maturity and risk taking behaviour. An unselected sample of 100 Post-graduate students were administered Personality maturity scale and Choice-Dilemmas questionnaire. The results revealed that individuals having high personality matarity were moderate risk takers, and those having moderate or low personality maturity were high risk takers. It was also evident that individuals showing high personality maturity also showed lower risk taking tendencies than those showing moderate or low personality maturity.

INTRODUCTION

Personality maturity seems to play a very important role in individual's interpersonal social and occupational behaviours. It means that individual has developed a certain unification of the whole self, a dependable individuality (Hepner, 1957). After attaining personality maturity, an individual is no longer one adopting trial and error for getting success, rather, on the basis of previous experience he knows what modes of behaviour would lead to success and what would lead only to new blockings. An individual's character becomes stable and his scales of values become established with the attainment of personality maturity and if his maturity is positive he feels and believes that adjustments by evasion and retreat eventually result in a lowered ability to deal with the next barrier (Hepner, 1957) If his maturity is negative, it is very probable that he might not stick to one point of means as also would show childish behaviour.

The review of literature on risk taking reveals that it has not been studied in relation to the personality maturity of the individuals, to the best of author's knowledge. Accordingly, it was proposed to explore the relationship between personality maturity and the risk taking behaviour. Keeping in view the nature of risk taking, that is a course of action where the concrete objective probabilities of the outcome are unknown (Luce and Raiffa, 1957) and its degree is determined by the considerations of desirability cost, payoff, and probabilities of success (Kishore, 1976) ; it was hypothesized that subjects having high positive personality maturity would be moderate risk takers.

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Method of Study

Sample

Subjects were 100 unselected post-graduate male students of Patna University. Their age ranged from 20 to 24·5 years with a mean of 22·76 and S.D. of .86.

Instruments :

(i) **Personality Maturity Test :**

Translated Hindi Version of Hepner's (1957) Personality maturity Test was administered the subjects after estimating its reliability. The split-half reliability after corrected by S-B formula (r-.89) and the test-retest reliability with a gap of 16 days (r-.76) were sufficient to warrant its application.

(ii) **Choice—Dilcmmas Questionnarie :—**

Adapted Hindi Version of Kogan and Wallach's (1964) CDQ was administered for assessing risk taking tendency of the aubjects. The internal consistency reliability (r=.76) and the stability (r=.71) of the Hindi Version (Krishna, 1972) of CDQ were sufficiently high.

PROCEDURE

Subjects were individually interviewed in their respective hostals. For estimating reliabilities a separate sample of 150 post-graduate students of Arts, Science and Commeree faculties was used. In the final data collection a second sample of 100 P.G. students of Arts, Science and Commerce was used.

ANALYSIS

The criteria for classifying the subjects into 'High', 'Moderate' and 'Low' groups wers their percentile positions. The first 33.33. percentile was considered as "Low" group the second 33·33 percentile was considered as 'Middle' group and the third 33·33. percentile was considered as 'high' group for the Personality Maturity scores but this was reverse for the CDQ scores because low score on CDQ means high risk taking and vice-versa.

RESULTS AND DISCUSSION.

In order to assess the relationship between personality maturity and risk taking tendency product-moment corelation was computed. The co-efficient of correlation (r=.12, $p<05$) revealed a non-significant negative relationship. The reasons might be that the risk taking is a decision making process under uncertainty where the loss and gain are the alternative outcomes and the personality maturity means that an individual adopts a means which he believes will ensure him success. It is why an individual with matured personality would not avoid risk taking but they stick to lower levels.

In order to test the hypothesis that individuals high on personality maturity will be moderate risk takers, chi-square was computed. The results have been presented in Table -1.

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Table-1

Association Between Personality Maturity and Risk-Taking Behaviour.

	Risk Taking				
	High	Moderate	Low	Total	Chi-quare (df=4)
Personality-Maturity					
High	7	20	11	38	
Moderate.	24	13	9	46	12·25
Low	9	5	2	16	

*Significant beyond-05 level of confidence

Table -1 indicates that high personality maturity was associated with moderate risk taking while the middle and the low personality maturity were associated with high risk taking. The findings revealed that majority (20%) S, of the high personality maturity group had preferred moderate risk taking, while majority of the S, of moderate personality maturity group (24%) and majority of the S, of low personality maturity group (9%) had preferred high risk taking. The findidg ©chi^2=12.25, df=4) was significant beyond .05 level of condidence.

Obviously, individuals having high and poitive personalit maturity deal with thc sitations on the basis of their previous experiences. They calculated the probability of outcome in advance of starting any course of action. This maturally makes delay in decision making which produces low risk taking (Irwin and Smith, 1957). As such, they are basically guided by the hope of success which in turn contribute to moderate riskiness (Deoharms and Deve, 1965 ; Robert, 1974).

For further comparison of the RI scores of the Ss of the high, the middle, and the low personality maturity Groups-*t*-ratios were computed, Findings have been summarised in Table-2.

Table-2

Comparison of Mean RT soores of the High, the Moderate and the low Personality Maturity Groups.

Group,	N	X	SD.	SE.	*t*-ratio		
					a	b	c
(a)High Pers. Maturity	38	100·41	11·18	1·81		5·78	4·78
(b)Middle Pers. Maturity	46	83·52	15·57	2·29			1·68
(c)Low Pers. Maturity	16	75.2	17·37	4·34			

*Not significant even at ·05 levels of confidence.

**Significant beyond ·01 levels of confidence.

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A persual of Table-2 makes it clear that the SS of high personality group were lower risk takers (X=100—41) than those of the middle personality maturity groups (x=83·52) and the low personality maturity group (m=75·27) as the mean differences were significant beyond .01 level of confidence. But the middle personality maturity group and the low personality maturity groups did not differ in respect of their risk taking as the obtained t-ratio (t=1.68, df=60) could not reach even the 5% level of significance. The finding reveal that as the individuals become more and more mature in personality their risk taking tendencies become lower and lower the vice-versa. This may be because the positive increase is personality maturity is associated with increase in experience and stability in character, thinking and value patterns. Accordingly an individual's courses of action become more logical rather then trial and error attempts.

SUMMARY AND CONCLUSION

The study proposed the investigate the relationship, if any, between personality maturity and risk taking behaviour. A sample of unselected 100 post-graduate male students of Patna University was administered the Personality Maturity Test and the Choice-Dilemmas Questionnaire. The finding reveals a non-significant negative correlation between the two variable and high personality maturity was assoctated with moderate risk taking while the middle and the low personality maturity were associated with high risk-taking. It was also evident that the SS having high personality maturity were low risk takers as compared to the moderate and the low personality maturity groups. But the SS having moderate and personality maturiy did not differ in respect of their risk-taking behaviour.

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Universalisation of Elementary Education in Uttar Pradesh

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The working Group on Universalisation of Elementary Education (1978), identified Nine educationally backward states, among them Uttar Pradesh is the most backward State. The enrolments in the 6-11 age-group and 11-14 age-group are respectively 74 per cent and 43 percent against the 'National achievements' of 95 per cent and 50 per cent in the respective age-groups at the end of 1984-85, which is far behind the national enrolment. It Was, therefore, considered worthwhile to examine the progress of universalisation of elementary education in Uttar Pradesh.

Uttar Pradesh is one of the northern states of India. On its north are China and Nepal and on the other sides its boundaries touch a number of other provinces of India In terms ofpopulation the state ranks first and in area second, under the Indian Union Geographically the State can be devided in five zones : east, west, central, Bundelkhand and hill area. The density of population is maximum in the eastern part and minimum in the hill areas. According to 1981 Census the population of the state was 110.86 million. Majority of people live in rural areas. The state has 895 development blocks, 231 tehsils, 57 districts and 12 revenue divisions. According to 1981 census only 27·38 per cent of state's population is literate (out of which 38.87 per cent are males and 14.42 per cent are females) as against the all India figure of 36·17 per cent (Shiksha Ki pragati, U.P. 1985). The enrolment figures of the elementary schools are alarmingly low, which is far from satisfactory. The 1/6th non enrolled children in the age-grup 6-14 in the country are only from Uttar pradesh. This is not to imply that no efforts have been made to improve the situation. In fact, the state Goverment has initiated independently as well as with Central assistance large scale developmental activities in the field of elementary education.

Since the verey inception of plan, greater importance has been given to the fulfilment of the directive principle of the Constitution envisaging universal coverage of Elementary Education. Actually this goal should have been achieved much earlier but the rapid increase in population and large percentage of drop- outs, the illiteracy and poverty of the rural masses and their indifferences towards education, particularly girls education have proved to be a serious impediment in the realisation of the goal of universalisation Lack of teaching aids in primary schools and shortage of school buildings, furniture has also been one of the reasons for large percentage of drop-outs.

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In spits of all these things, earnest efforts have been made in the past to realise this basic national objectve. As would be clear from the following tables, there has been a gradual but marked increase in enrolment from 28·18 lakhs in 1951 to 115.24 lakhs (anticipated) in 6-11 age-group at the end of sixth plan (Draft seventhFive Year plan and Annual plan, Education, Uttar pradesh (1985).

Table-1

planwise increase in population and enrolment in

Classes I-V

(Primary satage, 6-11 age-group)

Year	*Population (in lakhs)*		*Enrolment (in lakhs)*		*Percentage*	
	Total	*Girls*	*Total*	*Girls*	*Total*	*Girls*
1	2	3	4	5	6	7
1950-51	79·02	37·83	28·18	4·08	36	11
1955-56	83·85	40·14	28·05	5·44	33	13
1960-61	91·53	44·63	40·95	8.68	45	19
1965 66	107·90	51·96	90·18	31·39	83	60
1977-78	132·55	63·68	87·25	26·72	66	42
1979-80	142·78	68.50	93·17	29.45	65	43
1984-85	156·39	75·12	115·24	36·90	74	49

It is obvious from the table that, whereas the child population in the age-group 6-11 has only doubled, the enrolment of school going children has gone up by more than four times. In spite of this increase in enrolment, there are 26 per cent children in the age-group 6-11 who are out of school. Among these non-enrolled children more than 50 per cent are girls.

Table-2

Planwise increase in population and enrolment in

Classes VI-VIII

(Middle Stage, 11-14 age-group)

Year	*Population (In lakhs)*		*Enrolment (in lakhs)*		*Percentage*	
	Total	Girls	Total	Girls	Total	Girls
1	2	3	4	5	6	7

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1950-51	42.80	20.15	5·02	0,42	12	2
1955-56	45.51	21.15	6.36	0.68	14	3
1960-61	49.63	23.37	8.24	1.22	17	5
1965-66	55.12	28.83	15.14	2.56	27	10
1977-78	73.60	34.49	26.75	6.35	36	18
1979-80	79.27	37.15	27.92	6.72	35	18
1984-85	86.63	40.69	37.23	8.95	43	22

In the 11-14 age-group also there is a simliar increase in enrolment from 5.02 lakhs in 1951 to 37.23 lakhs (anticipated) at the end of the sixth plan. The child population in the above age-group has doubled from 1950-51 to 1984-85 whereas the enrolment has gone up by more than seven times during this period, still 57 per cent children at the middle stage are out of school. At this stage the enrolment of girls is only 22 per cent.

According to the norms of opening primary schools within a distance of 1.5 kms. the number of habitations above population of 300 which remained to be served at the end of the sixth plan is 4309. If the norm of 1 km. as laid down by the Govt. of India is taken up the number of unserved habitators comes close to 10500 (pandey, 1985). As per fourth all India educational survey (1978), there were 6725 rural areas in Uttar pradesh with a population of 800 or more which had no middle schools, within a distance of 3 kms. At the end of the VI plan there are 4812 habitations with a population of 800 and more which have st ll not been served with a Junior High school within a distance of 3 kms. Availability of financial resources does not indcate that it would be possible to open primary or middle schools in these unserved areas within a couple of years. Since indepen. dence a subtantial proportion of education budget has been spent on elementary education but provision of schooling facilities could not be made at all the places which fall within the norms, This may be, because of cuts in clear from the following table (Draft Seventh Five year plan & Annual plan, Uttar pradesh, Education, 1985).

Table-3

Planwise Expenditure on Elementary Education

(Rs. in lakhs)

Plan	Total Education	Elementary Education	Percentage on Elementary Education
First plan	1807	1271	70
Second Plan	1431	841	59
Third plan	4471	2949	66

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Annual plan (1966-69)	1231	732	60
Fourth plan	5701	3791	67
Fifth plan (1974-79)	9404	5005	55
Sixthplan (1980-85)	21483	9090	42

Anticipated.

It is clear from the above table that whereas in the First plan the expenditure on Elementary Education was 70 per cent of the total plan outlay for this has been declining gradually in the subsequent plan periods and in the sixth plan it was only 42 per cent of the plan outlay for Education department. The figures in the table above show that there has been substantial increase in expenditure on elementary education since independence but the gains in terms of educating the children in the age-group 6-14 are not substantial. About 26 per cent children at the primary level 6-11 age-group, and 57 percent children at the middle level 11-14 age-group are not attending schools. Out of 111 million people of the state about 80 million are still illiterate. In such a state of affairs it is difficult to achieve the goal of universalisation of elementary education only by formal means.

Now, when the state is on the threshold of launching the Seventh Five Year Plan there are still 37·4 per cent of children in the 6·14 age-group who are non-enrollod. To achieve the national objective of full enrolment by 1990, an additional 99·50 lakh children will have to be covered by the formal School system. The present enrolment of 122·24 lakhs children in the primary stage (including non-formal education) will have to be increased by another 44·92 lakh and similarly the present enrolment of 38·23 lakh children in the middle stage will have to bn increased by an additional enrolment of 54·58 lakh children This would mean almost doubling the present educational set up for elementary education.

Thus, despite the efforts made by the state Government, Uttar pradesh lag behind at the bottom in the task of achieving enrolment at elementary education level. This is further campounded by the fact that the enrolment rates are highly uneven across different scetions of society. The problem of non-enrolment is quite acute among the scheduled easte and scheduled tribe population. Also the proportion of enrolment among girls is abysmally low. Some of the reasons of non-enrolment of girls are : from a very early age they begin to look after their younger brothers and sisters, many parents do not like to send then to co-educational schools, other cultural constraints and traditions of the society, mass illiteracy among adults and less interest of qualified women teachers to take up teaching job in village, which also affect badly their enrolment in elementary education.

Another factor which makes the problem more complex as it does elsewhere in the country, is. the heavy rate of drop-out prevalent in the schools of uttar pradesh. Accor-

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ding to pandey (1985), it is at present more than 50 per cent in the age-group 6-11. Thus the task is not merely to enrol the children at primary and middle schools but also to effectively check the problem of wastage and stagnation.

At present there are millions of children who are the dropouts from the elementary schools, who have never attended schools, who are first generation learners, who cannot attend the schools due to being busy with their parents in earning their livings, etc. The major problem of the state is, how to impart education to such children in the age-group 6-14 years. So far as the education of these children is concerned, it is necessary to give them education in order to enable them to complete their education upto class v or class VIII, in order to enable them to join class VI or class IX respectively, as the case may be, so that they may continue their education. These children can not be given education in the formal schools for two reasons : One is, the rigidities and the constraints of the formal system. These children would like to come to the school For studies at such hours when they are free from their domestic work. The second reason is that these children cannot be put up in a particular class of formal schools and their levels of achievement does not fit a particular class.

Viewing the Uttar pradesh's elementary education Scene, in the context of the problems highlighted above, it is easy to note that achieving universal elementary education exclusively through the existing system of formal schools is a tall order expectation.

N ed for Atternative Structures :

From the human point of view all children are equal They may belong to different persons, families or classes in society, but all of them belong to society. It is he duty of the society to provide them the opportunities to bloom like flowers to the full of their capacity. As it is bed to deprive the children of the minimum facilities and opportunities, so it is bed to make children luxurious in their childhood. The first type of children become frustrated persons, the second type become parasites and exploiters. These deprived children are matured and acttive than the children belonging to the educationally privileged families who lead a self centered life restricted to study and examination. But most of these children who are not going to school are the productive members of society. They help production either by looking after the family of their parents or they work at some places to help the production directly. Therefore, such children are in no way inferior to the children attending the schools. Rather in certain respects they are superior to their counterparts. Here one question arises, can we ignore these children from Minimum Need of Elementary Education ? the answer is certainly not.

The programme of universalisation of elementaay education envisages admission envisages admission and retention of children in elementary education, but part-time eduction for those who either do not joins to school or drop out before the age without the achievement of the target prescribed for elemetary education. The scheme of universalisation of elemetary education has been formulated at the demand of Art 45 of the Indian

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constitution. The consideration for the scheme of universalisation of elementary education may be sociological, human and economic. In the present situation in the country, as well as in the state, elementary education (Class I-VIII) is a social need. Elementary Education is a general education for every citizen of the country/state whatsoever his vocation be.

At this point two questions can be raised about the scheme of universalisation of elementary education which are as follows :

(i) Can we achieve the universalisation of elementary education through the formal system ?

(ii) Do we need a programme of education which is different from the prevailing formal system in order to achieve the target ?

In response to these questions the following points may be considered :

(1) Most of the out schools children in the age-group 6-14 cannot afford to attend the schools for five-six hours at the usual time as they are either productively busy or looking after the domestic work. This situation is going to continue for several years.

(2) There the limitation of the budget for elementary eduation. The present provides education to only one third of the population in the age-group 6—14.

(3) Formal Education being given in schools has not taken into consideration the characteristics and the needs of seventy per cent non-school going children, though certain doubts and queries are being raised about the relevance and usefulness of the formal education.

(4) The children getting formal education can wait to get relevant and functional educaon. But the children to be covered by the alternatives cannot afford to wait.

The above mentioned points suggest that there is a need for developing alternative structures of education also at the elementary stage. The working group on universalisat ion of elementary education (1978), also expressed the same view that 'every child shall continue to learn in the age-group 6- 4 on a full-time basis, if possible, and on a part-time basis, if necessary' it is this background that the program me non-formal education has come into operation, as supplementary to the formal system of education, for achieving the gool of universalisation of elementary educae ion.

Keeping in view the clientale and their requirements, the non-formal education programme for children in the age-group 9-14 has been started with two specific objectives i e. (i) to enable the willing children to get entry in formal schools at multiple points and (ii) to improve the quallity of children. The term improvement in quality of life children means the development of literacy and numeracy ability of children so that they can use this knowledge for solving day to day problems. It further means to inculcate health habits and hygienic sense among children to-gether with a social and environmental awareness. This term also refers for some vocational training.

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In the present programme of non-formal education, it has been decided to cover the five years formal schooling of primary stage, only in two years. Under this programe the primary stage covers, the age-group 9-11 years instead of 6-11 years. The five year course of primary stage (6-11 years) is condensed and is being completed only in two years (9-11 years), while at the middle stage it is just similar to formal schooling in timings, i.e. 3 years (11-14 age group).

Non-Formal Education programme (9-14 group,) Towards Universalisation of Elementary Education in Uttar pradesh :

The Utter pradesh Government has implemented the programme of 'Non-Formal Education' for children the age-group 9-14 years with the 50 per cent financial assistance of Government of India, It is viewed as complementary to formal education and is treated as an alternative programme to meet the objective of universali-sation of elementary education. This programme is meant for providing opportunities of part-time elemenary education to such children of the age group 9-14, who have either dropped out of formal schools or could not avail of the opportunity of schooling because of various reasons. Majority of such children belong to such sections of the society who are scoially and economically not well off.

It is a system of part-time education for about two hours at a time which is convenient to childarn from morning to night (before 8 p.m). other then schooling hours of formal system. The duration of the course is of two sessions of nine months for the age group 9-11 and three for the age-group 11-14,

The non-formal education programme which was first initiated by the state Government on an experimental basis in 1975, has now considerably grow in its acc ssibilty and coverage. Systematically, and in a planned manner, this programme started in 1980-81. On the basis of Fourth All India Educational Survey (1978), educationally backward blocks in each of the district of the state were identified. The criterian of backwardness was based on the enrolment of children of the age group 6-11 and 11-14. In 1980-81, this programme was started in two educationally most backward blocks in all 56 districts of Uttar Pradesh, covering all blocks of the state. In these blocks 50 centres for primary stage i. e, for the age group 9-11 years, and 15 centres in plain areas, 10 centres in hill areas for middle stage, i. e. for the age group 11-14 years were opened. In addition, in the year 1981-82, 112 more new blocks were selected for this programme. In each block 50 centres for primary stage and 7-8 centres in plain areas and 5 centres in hill areas for middle stage were opened. Further, in 1982-83,108 blocks were covered under this programme. Thus till 1982-83, six blocks of each district of the state were covered under this programme, except Dehradun and Uttar Kashi, which have only 4 blocks each (Shiksha ki Pragati, U. P. 1983).

In the following year two additional blocks in each of the identified districts have been covered. The number of centres opened in each of the selected blocks was 50 for the primary stage and 7-8 for the middle stage. The proposed coverage of blocks in the year 1984-85 is the same and the number of primary stage centres is 6400. In 8 hill districts of the state 80 middle stage centres targetted for the year 1983-84 were opened in the following year. It is proposed to cover each block of the state by 1985-86. The location of the centres opened in earlier years goes on changing after the completion of the term.

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At present (1984-85), this non-formal education programme for children has been expanded in 464 blocks with 24·610 Centres for primary stage and 3,859 centres for middle stage. Other than this in the current financial year, it has been proposed to open 3 200 primary stage centres exclusively for girls in 9-11 age group. For this, 50 centres in all districts except Pithoragarh, Chamoli, Uttarkashi and Tehari Garhwal will be opened in the state, on the basis of 90 per cent financial assistance from the Government of India. Among these, in Lucknow Ballia and Aligarh, it has been proposed to open 250 centres in each district. Along with this, it has been also proposed to open 100 centres in each block, in 20 blocks of Lucknow, Raibarelly and Mirzapur districts under the ICDS programme with the help of Norway and Sweden.

Under this programme of non-formal education, which is being carried out since 1980-81, in the State, it was expected that in each of these centres 25 children would be enrolled. Greater emphasis was given to the enrolment of girls, children belonging to scheduled castes and scheduled tribe. Children for primary stage were selected from amongst those who had either no schooling or had dropped out of the school and we older in age. Villages from amongst the selected blocks having largest number of non-school going girls and boys, especially of the weaker sections of the society were given preference for opening non-formal education centres.

Target and Achievement :—5600 centres for children of the age-group 9-11 and 1600 centres for 11-14 age-group were targetted each year since 1980-81 but for the exception of 800 centres which were to be started in the year 1980-81 for the middle stage children. The actual achievement along with progressive total is given in the table given below (Pandey. 1985) :

Table-4

Number of non-formal education centres and Progress in Enrolment

Year	Centres		Enrolment	
	Primary Stage	Middle Stage	Primary Stage	Middle Stage
1980-81	5364	1404	101049	19412
1981-82	11043	2261	238249	38856
1982-83	16657	3085	370444	64850
1983-84	20857	3829	475082	81587
1984-85			610000	81587
Sanctioned No. (84)	29400	3920		
Achievement	24610	3859		

The non-formal education centres are generally housed either in a school building, a panchayat house, a temple, a mosque or in any other public or private dwelling which in deemed suitable for the purpose of conducting the classes. The five year course of the Primary stage has been condensed into two years. One of the objectives of the non-formal

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education programme is to integrate out of school and drop-out children in the formal stream of education. Keeping in view this objective the programme enables willing children to get entry in formal schools at multiple points. For the benefit of the learners there is a system of continuous evaluation. At the end of the year, children are promoted to the next course after getting the education, for prescribed period. The first and second round centres of primary stage which were started in July 1980 and in January/February 1981, had a public examination for the children along with the children of class V standard studing in formal schools, in May 1982 and 1983 respectively.

The first round middle stage centres were started in January/February 1981. Children enrolled in these middle stage non-formal education centres appeared at the junior high school level examination in 1984, after completing three years of study. Similarly the children enrolled in the primary stage NFE centres, opened in third round in 1982 appeard for class V level examination along with the children of primary schools in 1984.

Likewise, the children enrolled, in the fourth round primary stage NFE centres opened in 1983, and in second round middle stage centres opened in session 1981-82, appeared for primary level and junior high school level examination in 1985 respectively. The following table gives and middle stage centres held in different years, as well as the progress of primary and middle stage non-formal education performances.

Table-5

Results of Examinations of children of Primary and Middle stage Non-formal Education Centre held in Years, 1982 to 1985

Years	Stage	*Number of Children* Registered	Appeared	Passed	Percentage
1982	Primary Stage	49·268	42·789	37·766	88
1983	Primary Stage	51.781	44·785	42·098	94
1984 (i)	Primary Stage	2·29·757	1·77.338	1.67784	94
(ii)	Middle Stage	18·305	11·089	7·753	70
1985 (i)	Primary Stage	2·12·643	1·62·846	1·52·061	93
(ii)	Middle Stage	16·751	10·152	7.337	72

*Information was received only from 52 districts out of 56 of the State (Shiksha Ki pragati, U.P. 1985).

The figures in the table above highlight two issues ; there is substantial drop-out at both the levels of education,and at the middle stage there are many children who are not benefitting from this scheme. Heavy drop-out rate is an alarming situation for this programme also, from which the formal schooling is already suffering. It is necessary to take

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remedial steps for this evil, other wise, the very purpose, for which these centres have been started will not be fulfilled.

There also seems to be lack of planning, because the centres to be opened in July/August have been opened in January/February i.e. for example in the year 1980-81 for middle stage. there things suggests to be taken care, so that the goal of universalisation of elementary education could be achieved at least in the age-group 6-11, by the end of seventh plan i.e. 1990.

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'A study of Adjustment Problem of Higher Secondary Students in Relation To Locality.'

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Introduction :

Adjustment is a important characteristic of living organism. Every organism tries to achieve some sort of working arrangement with his environment. We see that adjustment needs reaction to the varying demands and pressures of social envornment imposed upon the individual. Chawala (1970) reported that adjustment is closely related with achievements colmen (1961) and Turner (1964) came to conclusion that SES exercises greater influence on educational achievement of students than any other factors. Gupta (1979) have reported that majority of adolescent girls well adjusted. It clearly indicates that locality & sex might be haveing a significant impact on the adjustment of the indiv. iduals. The secondary school students are considered as an asset for any society therefore to know their level of adjustment may help a teacher to solve their various problems coming in the way. Thus in this light the present investigation has been carried out to in order to present an analytical view on adjustment of secondary school students in relation to sex & locality.

Purpose of study :

The present study was conducted to find out the influence of locality on the adjustment of students studying in the secondary schools. Here locality refered to rural & urban background.

Hypothesis :

To pin point the present study it was hypothesised that there exists no signiticant difference between the adjustment of rural and urban students (Boys + Girls) tow.ords following four aspects of adjustment viz-home, social, health & Emotional and college.

METHOD

Sampling Process :

The present study was conducted one sample of 200 higher secondary students of Distt. Tehri Garhwal. Out of which 100 (Boys & Girls) were selected from rural areas & the same from urban areas.

Test Used :

The adjustment inventory developed by Dr. V. K Mittal was administered to measure the adjustment or the students. The inventory consists of four aspect of adjustment:—

(i) Home adjustment.
(ii) Social adjustmeant
(iii) Health & Emotional adjustmen'.
(iv) College adjustment.

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The inventory is meant for the boys of 6-14 age group, but can be used for the adults too. It has 80 statements & responses are to be given on theree point scale. The reliability is +=94 at=95 by spilt half method.

Administration of The Test :—

The adjustment Inventory was admi-nistred an the sample. Each subject was provided a copy of the inventory along with pencil. The aim of the test & the way to answer the questionswere fully explained. They were instructed to mark (v) on the three point answering scale. The investigator remained present during the test administration to maintain reliability. After completing the test all the papers wrre collected. It would have hardly taken 50 to 55 minuets in operating the test.

Scoring.

The collected inventory was scored the help of sioring key for the separate four aspects of adjustment

Results Discussion :

The present investigaton was under taken to examine the segnificant difference had ween the adjustment of rural & urban students, in relation to their local environments. After scoring the test, the mean & S.D. were calculated. Eor statistical comparison *'T'* test was used. The estimate s of the boys group are given below :

TABLE-(1)

Area of Adjustment :	Rural Boys			Urban Boys			C.R.	Level of Significance
	N.	M.	SD.	N:	M.	SD.		
1. Home Abjustment.*	50	47.10	13.09	50	41.50	15·00	1.09	S.
2. Social Adjust-ment.	,,	46.40	14.75	,,	45.50	15.22	0.03	NS.
3. H & E. Adjust-ment:	,,	47.80	11.97	,,	45.40	13.66	0.93	NS.
4. College/school Adjustment.	,,	43.70	14.98	,,	42.30	16.57	1·44	NS.

*Significant at .05 level of confidence.

NS-Not significant.

The table show' that mean value of Home adjustment scores (47.10) of rural boys is found more than the mean value of Urban boys. when mean that rural boys are betterly adjusted in their home activites or in their home .environment. This difference is found significant at the ·05 Level of confidence. Thus it was concluded that rural boys be compared to urban boys have significantly good home adjustment.

In the field of social adjustment the mean value of rural boys is found very slightly more than that of their urban counterparts. But this difference could not be reported to be

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significant at .01 & .05 level of confidence. This indicates that they are equally adjusted in their socialistic activities. Like this the mean scores of H & E. adjustment of rural boys marked very little more than related urban fellows. It is perhaps that the boys rural areas are free from the collision & tension of urban areas. But this difference is not found significant at selected level of confidence.

The fourth aspect of adjustment was college adjustment, which also did not show any variation in the rural & urban boys to-wards their school curriculam, co-curricular activities & soon.

Thus the study shows how for the boys are concerned, they have no any local impact except on home adjustment, social, H & E and college adjustment. The urban facility & asses sibility has even no significant influence on the adjustment of urban boys: Comparactively the mean velues of rural boys are found mare in every aspect of adjustment, but no. significantly, to be reported.

The scores of Rural & Urban Girls in their four aspects of adjustment.

TABLE - (2)

Sl. No.	Area of Adjustment.	Rural Girls N.	M.	SD.	Urban Girls N.	M.	SD.	C.R.	Level of Significance
1.	Home adjustment.	50	50	14·45	50	44·90	11·79	0·63	NS.
2.	Social adjustment.	,,	50·10	12·78	,,	47·20	15·60	1·02	NS.
3.	H & E Adjustment.	,,	49·30	12·86	,,	46·20	17·72	1·00	NS.
4.	College & School Adjustment.*	,,	48·50	15·26	,,	43·00	12·34	1·99	S.

* Significant at .05 level of confidence.

The table reveals that like the adjustment of boys group the girls groups also found intented towards the same findings. The mean scores of Home, social, H & E adjustment of rural girls were found more comparatively to urban girls, but not significantly, dipicts that the local environment of urban & rural surroundings have no difinite impact on the adjustment of the girls studing in secondary schools.

The only significant difference was noted in the field of college adjustment, where the rural girls were found significantly more adjusted at the .05 level of confidence. This shows that with the progress of educational facilities in the rural areas the awakening in ladies towards education has been arisen.

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Mother's Academic Qualifications (MAQ) and the Development of the Moral Concepts of her Child

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The present study is aimed to find out the relationship between the Mother's Academic Qualifications (MAQ) and the development of the moral concepts of her child. For this purpose experiment was conducted on 1249 students of VII Grade residing at Indore. The moral concept Development Test, (MCDT) was administered. The statistical technique of ANOVA & 't' test were used. Results showed that mother's Academic Qualification has significant impact on the existing moral concepts of her child.

INTRODUCTION

Moral concepts is a cognitive aspect of morality. The main concern of the cognitive development approach to moral concepts is with congitive factors and moral awareness and moral thinking. The cognitive theory of moral development of the child has been established by the Swiss Psychologist Piaget. Mother's Academic Qualification (MAQ) is an important variable for the development of moral concepts among child. Negligiable research has been reported in the area of MAQ and the Moral Concepts Development of her child. A number of moral concept is existing in different societies. But for the purpose of this study ten moral concepts viz,. Duty Truth, Responsibility, Judgement, Discrimination between good and bad, Sympathy, Respect, Obedience, Helpfulness and Honesty have been selected.

METHODOLOGY

Subject : A sample of 1249 students of VII grade was selected for the present study. The Sample included 264 First generation learners (FGL) and 985 Second generation learners (SGL).

Tool : The Moral Concept Development Test (MCDT) was used.

Procedure : For the purpose of the study the sample was drawn, by employing stratified random sample technique, The Moral Concept Development Test (MCDT) was administered to all the students.

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Results : With the help of the analysis of variance (ANOVA) approach the effects of Mother's Academic Qualification (MAQ) on different moral concepts were assessed. The result's of the ANOVA are given in Table I.

Table-I : Summary of (ANOVA) Showing Effects of Mother's Academic Qualification (MAQ) upon Different Moral Concepts.

S. No.	Dimensions of MCDT	F-Values
1.	Duty	48·23**
2.	Truth	24·52**
3.	Responsibility	36·29**
4.	Judgement	28·98**
5.	Discrimination between good and bad	14·45**
6.	Sympathy	21·54**
7.	Respect	16·23**
8.	Obedience	20·00**
9.	Helpfulness	22·68**
10.	Honesty	10·26**
11.	Overall Morals	65·72**

**Significant at 0·01 level

It is evident from Table I that all the *F*-Values for df 3/1245 are significant at 0·01 level. This means that Mother's Academic Qualification affect all the ten moral concepts of her Child.

It has been borne out by this investigation that although all the ten moral concepts selected for this study, are significantly affected by MAQ, yet the impact of MAQ on different moral concepts is not uniform. For instance, the impact on the moral concepts of Duty (F-48·23) is the highest. This is followed by impact on concepts of Responsibility (*F*-36·29) Judgement (*F*-28·98), Truth (*F*-24·52), Helfulness (F-22·68), Sympathy (*F*-21·54), obedience (F-20·00), Respect (F-16·23), Discrimination between good and bad (*F*-14·45) and Honesty (*F*-10·26).

In order to see the directions of influence of MAQ upon individual variables related to the moral concepts of the students, the significance of difference between the Mean Scores for different variables for four different groups of MAQ Viz., Group A (MAQ Primary) Group B (MAQ Secondary), Group C (MAQ Graduate) and group D (MAQ Post Graduate) was worked out.

The '*t*' values for all ten variables of moral concepts and the total scores for different groups are given in Table 2.

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Table-II : Summary of Significance of Difference Between the Mean Scores for Different Moral Concepts of Children of VII Grade having Mother's with Different Academic Qualifications,

S. No.	Dimensions of MCDT	Mothers Academic Qualification	*'t' Values* Primary	Secondary	Graduate	Post Graduate
1.	Duty	Primary	—	9·22**	8·23**	6·45**
		Secondary	—	—	3·43**	2·53**
		Graduate	—	—	—	0·26**
		Post Graduate	—	—	—	—
2.	Truth	Primary	—	5·97**	6·65**	4·57**
		Secondary	—	—	3·99**	1·89
		Graduate	—	—	—	0·82
		Post Graduate	—	—	—	—
3.	Responsibility	Primary	—	6·77**	7·03**	6·93**
		Secondary	—	—	3·62**	4·29**
		Graduate	—	—	—	1·29
		Post Graduate	—	—	—	—
4.	Judgement	Primary	—	6·81**	7·28**	3·96**
		Secondary	—	—	3·86**	1·10
		Graduate	—	—	—	1·79
		Post Graduate	—	—	—	—
5.	Discrimination between good and bad	Primary	—	3·96**	3·74**	5·15**
		Secondary	—	—	1·76**	3·66
		Graduate	—	—	—	1·80
		Post Graduate	—	—	—	—
6.	Sympathy	Primary	—	6·19**	6·20**	4·22**
		Secondary	—	—	2·49**	1·26
		Graduate	—	—	—	0·66
		Post Graduate	—	—	—	—
7.	Respect	Primary	—	5·08**	8·76**	4·991**
		Secondary	—	—	2·03**	0·60
		Graduate	—	—	—	0·60
		Post Graduate	—	—	—	—
8.	Obedience	Primary	—	5·03**	5·18**	5·35**
		Secondary	—	—	2·52**	3·24**
		Graduate	—	—	—	1·14
		Post Graduate	—	—	—	—
9.	Helpfulness	Primary	—	5·93**	9·09**	5·76**
		Secondary	—	—	2·46**	1·04
		Graduate	—	—	—	1·46
		Post Gaduate	—	—	—	—
10.	Honesty	Primary	—	3·29	2·84**	4·62**
		Secondary	—	—	1·09	3·24
		Graduate	—	—	—	2·14
		Post Graduate	—	—	—	—
11.	Overall Morals	Primary	—	9·79**	10·63**	8·05**
		Secondary	—	—	5·19**	3·69**
		Graduate	—	—	—	0·45
		Post Graduate	—	—	—	—

** Significant at ·01 level, * Significant at ·05 level.

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It is evident from Table-2 that there is direct correlationship between higher education of mother and the development of all the ten moral concepts selected for these study. In a general way if the mother is more educated, she can influence the development of moral concepts of her child in a better way. For instance in case of duty, moral mother's with secondary education (t=9·22) influence the moral in a better way than the mother's educated upto primary level. Similarly, graduate mother's (t=3.43) influence the duty moral better than mother's educated upto secondary level. But post graduate mother (t=0.26) do not seem to affect the Duty moral better than graduate mothers. The situation with regard to other moral concepts is depicted in Table No. 2.

DISCUSSION

There are many significant reasons for positive relationship between Mother's education and the development of different Moral Concepts among her child. First reasons is that the mother spends more time with her child. Bacon (1955), Poffenberger (1959) and Allport (1961) have also found that traditionally the mother is the parent who usually spends more time with the child, plays with the child more and thus provides him with more happy experiences than father. Feinberg (1953) is also of the opinion that mothers are perceived by the child as warm and are limitated.

Another reason is that the educated mother has prestige in the eyes of the friends of the child. Spock (1951) found that professional mothers have more and stricter rules and they require their children to assume more responsibilities. Further, educated Mother's are found to have rich speech habits and language patterns to encourage the development of moral concepts among her children.

In fact, here is no organised body of literature examining the relationship of Mother's education to child's moral development. Indirect evidence, which support the findings of the present study that the Mother's education has an important role to play in determining the level of moral concept development of the child.

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A study of the Causes of Indiscipline among students as viewed by Teachers and Students

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The study aimed to compare the views of University teachers and students regarding the causes of indiscipline among college and university students and to find out the extent of agreement between the two groups on this issue. Prompted primarily by the consideration that most such investigation have been done with only glib and loosely drawn instruments. A 30-items Indiscipline Questionnaire was developed, following the required psychometric procedures, and administered to unselected postgraduate teachers and students, 50 each. Although the overall agreement between the two groups regarding the relative importance of causes was insignificant (rho=.08), both groups agreed that exploitation by politicians, non-utilitarian character of modern education, and strong apprehension of unemployment and insecurity, were among the five most important causes of indiscipline.

INTRODUCTION

The investigation was taken up with the double purpose of finding out (i) what, according to University students and teachers constituted the important causes of indiscipline among students of college and university level and (ii) what is the extent of agreement between the views of the aforesaid students and teachers on this issue.

The problem of indiscipline among students has become a burning problem of the modern times and is seriously engaging the minds of educationists, politicians, administrators and social thinkers, Although some investigations have been made into the causes of indiscipline and unrest among students (e.g. Roy and Boral, 1964; Sarkar, 1964; Bhattacharya, 1969; Singh and Krishna, 1970 and walker, 1973), these have either failed to take into account the views of teachers or were made to proceed with only glibly drawn tools showing little regard for the observance of even minimum psychometric rigours in their development. The investigation reported here aimed to find out the views of university students and teachers regarding the causes of indiscipline among college and university student and to examine the degree of agreement between the two groups on this issue with the help of a method which has not been used by other researchers in this field.

METHOD

A Construction of Questionnaire : The objective of the investigation was to make a comparative study of the views of University Teachers and students regarding the causes of indiscipline among students of college and University level. This required the construction of a questionnaire which was done as per undermentioned steps :—

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(i) Since the study was intended to be conducted finally on Post-graduate students on the student side and on such teachers who taught both at the Under-graduate and Post-graduate and level on the teacher side, twenty Post-graduate students and twenty teachers of the abovementioned category were each asked to write down ten important causes of indiscipline among college and University students as viewed by them. For the purposes of this study, indiscipline was defined as "violation, on the level of overt behaviour, of the traditionally accepted codes of conduct in the society in general and compus in particular"

(ii) The lists were scrutinised by the authors in collaboration with two more teachers of Psychology. As a result of this scrutiny, the causes mentioned in the lists were found subsumable under five broad heads, namely, (a) home environment and parental practices, (b) campus conditions, (c) want of proper moral training, (d) interference from politicians, and (e) overall unfavourable social conditions.

(iii) Taking hints from the abovesaid lists presented by the twenty teachers and twenty students, a preliminary questionnaire having 75 statements, 15 for each of the five areas stated above, was prepared, The statements were shuffled and placed on the questionnaire in a random order so that any systematic area-wise placement of items was avoided.

(iv) This preliminary questionnaire was given to a fresh set of two teachers and two students of the same category as stated above who were asked to examine each item for clarity of meaning and than for relevance and it was proposed to drop such items which were judged to be ambiguous or irrelevant even by one out of the four judges. Twenty eight items claimed elimination on this score and fourty seven items survived.

(v) The forty seven item questionnaire, supported with five response categories namely, strongly agree, agree, undecided, disagree, strongly disagree, was now circulated among ten fresh students and fresh teachers whose responses were obtained twice with an interval of twenty five to thirty days between the two administrations. This was done in order to judge the reliability of each individual item for which the test-retest reversal of responses was noted item-wise. An item qualified for being retained for the final questionnaire only if its reversal -frequency did not exceed 2, i.e. 10%. If an item brought at the hands of an individual respondent a positive r sponse (strongly or agree) on the original test and a negative response (strongly agree or disagree) or even the neutral response (undecided) on the retest it was treated as a case of test-retest reversal. Similarly if an item elicited a negative response on the original test and a positive or neutral response on the retest, it was to be counted as a case of test-retest reversal. Since a questionnaire (not a scale was being developed, the reliability of each individual item only could be judged for which the test-retest reversal scoreios an inverse but sound criterion. Sevnteen items were eliminated as a result of this scrutiny and only thirty items could be saved for inclusion in the final questionnaire.

This thirty-items questionnaire with the five response categories stated above was thus finally constructed for use in this study. This questionnaire was called the "Indiscipline Questionnaire".

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(B) *Sample and Procedure* : The 30-item indiscipaline Questionnaire was Finally administered to unselected samples of 50 Post-graduate students and 50 teachers who taught both at the Under-graduate and the Post-graduate levels. In bolh the samples 25 Ss came from the Arts and 25 from the Science faculty. Tne questionnaire was administered individually to each subject as it was difficult to have teachers come and participate in batches. The views of the two samples were then compared in the ways detailed below—

ANALYSIS AND RESULTS

In Table 1 are presented the ranks awarded by the teachers and students to the different causes of indiscipline as laid down in the questionnaire. The rankings are based on the calculation of an "Importance Score" assigned to each item which was computed by the formula—

$$IS = Sum\ (RCS \times RCn)$$

where IS = Importance Score
RCS = Response Category Score
RCn = Number of Cases falling in a particular response category.

where, again, RCS means an award of

4 marks to 'Strongly agree',
3 marks to 'agree'
2 marks to undecided,'
1 marks to 'disagree',
0 marks to 'strongly disagree',

The Imporance Score of each item along with its rank (in Parentheses) awarded by the two samples are given in Table 1. In order to find out the amount of overall agreement between the views of the student and the teacher groups a rank-order correlation (rho) was computed on the basis of the ranks awarded to the different items as per 'Importance Scores' earned by each item.

Table-1 : Importance score and rank of Each item

	Item	*Importance Score & Rank* Student	Teacher
1.	Politicians use the students for fulfilment of their personal ends	166 (3)	174 (4.5)
2.	Parents have lost control on their childern	110 (26)	168 (7)
3.	There is nothing in the curriculum of the University to keep the students desirably engaged	130 (16)	98 (23.5)
4.	Efficient teachers are not appointed in the teaching profession	142 (9.5)	80 (29)
5.	There is co-education which is something that does not fit into the frame of the Indian culture	98 (27)	96 (26)
6.	Astrong epprehension of unemPloyment and insecurity prevails which provide background in which education appears meaningless	168 (2)	176 (3)
7.	There is lack of religious training	128 (17.5)	140 (13.5)

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8.	Students learn many undesirable things from the films and feel tempted to experiment with these in the college	128 (17.5)	148(10.5)
9.	The traditional method of teaching is followed in which special attention to individual student is denied	90 (29)	94 (28)
10.	Many students have not got the right type of environment in their homes	94 (28)	174 (4.5)
11.	The assistance of Police has been occasionally requisitioned for the maintenance of peace in the University campus	135 (13.5)	142 (12)
12.	Vice-Chancellor and Registrars are generally not academicians	114 (24.5)	116 (18)
13.	There is scarcity of hostels for students	146 (8)	162 (8)
14.	The system of examination is defective	118 (11·5)	100 (22)
15.	Casteism, groupism, favouritism, nepotism and things of that sort are at their climax	192 (1)	98 (23·5)
16.	Pay scales of teachers are not adequate	78 (30)	185 (1)
17.	Bright students do not receive special guidance	138 (11·5)	116 (18)
18.	Administration does not co-operate with educational institutions	118 (23)	148 (10·5)
19.	Students do not have adequate occasion to participate in extra curricular activities	122 (21)	76 (30)
20.	Religious books are not prescribed in the courses of study	114 (24·5)	132 (16)
21.	Teachers are otherwise engaged and have no time for to prepare for their classes	136 (13·5)	104 (21)
22.	Parents are satisfied by shifting to the University the responsibility of education of their wards and do not further co operate with institution	124 (19)	178 (2)
23.	University has no guidance service	150 (6)	140 (13·5)
24.	There is no moral or spiritual teachings	132 (15)	116 (18)
25.	Students do not have clear objectives before them	142 (9·5)	156 (9)
26.	There is a big gap between the rich and the poor	148 (7)	136 (15)
27.	Teachers directly participate in politics	164 (4)	108 (20)
28.	Boys and girls wear dresses which are provoking	122 (21)	96 (26)
29.	Teaching equipments are inadequate	122(21)	96 (26)
30.	Modern education is viewed by the students as devoid of any practical utility	152 (5)	172 (6)

Note : (a) Figures in the parentheses represent ranks
(b) rho=.08

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Table-2 : given below points to the fiive most important causes of indiscipline as viewed by the students and teachers—

Table- 2 : Five Most Important Causes of Indisciplne as Viewed By Students and Teach**rs.**

5 most important causes as ranked by student		5 most important causes as ranked by the teachers.	
Rank	Causes	Rank	Causes
1.	Prevalance of casteism, groupism, favouritism and nepotism (Item 15)	1.	Poor pay scale of teachers (Item 16)
2.	Strong apprehsion of unemployment and insecurity in the background of which education appears meaningless (item 6)	2,	Parental indifference (item 22)
3.	Exploitation by the politicians (item 1)	3.	Strong apprehension of unemployment and insecurity in the background of which education appears meaningless (item 6).
4.	Teacher's participation in politics (item 27)	4.	5 Exploitation by the politicians (item 1).
5.	Perception of modern education as devoid of any practical utility (item 30)	5.	5 Perception of modern education as devoid of any practical utility (item 30)

Evidently, the teachers and the students agree that exploitation by politicians, the non-utilitarian character of modern education and strong apprehension of unemployment and insecurity prevailing in the minds of the students are among the five most important causes of indiscipline among students. It appears that in the modern system of education, students have to labour and struggle, rather meaninglessly, under conditions which are characterised by want of a clear perception of goal and by visions blurrrd by strong future apprehensions.

Although there is an agreement between the students and teachers over the three causes stated avove as coming under the five most important cause the overall agreement between the two groups is very low and insignificant as revealed in the obtained *rho* 0·8. In this background, the importance of the three causes stated above on which the two groups have shown agreement becomes all the more sharpened. To show an agreement over three cause as falling among the five most important causes while the overall agreement is miserably low and insignificant is clearly indicative of the fact that these three causes are too glaring to be lost sight of by either group. The study leads to the conclusion that althougha verry low and insignificant agreement exists between the students and teachers over the relative importance of the different causes of indiscipline among students the three causes mentioned below are among the most important causes as viewed by both the groups:

(i) Exploitation by politicians for the fulfilment of their personal ends.

(ii) Strong apprehension of unemployment and insecurity prevailing in the minds of students in the background of wich education appears meaningless.

(iii) Non-utilitarian character of modern education.

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Superstition Among College Students

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A Superstition Scale developed by the researchers to ascertain superstitions relating to luck and fate, sorcery, magic and ghosts, religion, astrology as well as social and personal life was administered to 400 students reading in two constituent colleges located at Arrah in Bhojpur district. Taking two levels of sex (male and female) and two levels of Faculty of education (Arts and Science) the study was conducted in 2×2 factorial design, each cell containing 100 cases. Statistical analysis based on ANOVA t-test indicated that the four groups differed significantly to confirm interactional effect of sex and Faculty of education of the students upon their superstitions. The girls reading in the Faculty of Arts scored highest on superstition while the boys of science Faculty were found to be least superstitions. Difference in Faculty of education caused significantly greater variation among the girls than among the boys.

INTRODUCTION

Superstitions are irrational beliefs which lack objective and empirical evidence but continue in a society for a long time. They are negation of scientibic outlook and beliefs, But the paradox is that in this world of science and technology they are found in every society. They prevail not only in underdeveloped Asian and African countries (ef. Zaid, 1970; Marwick, 1970 for details) rather the so called advanced western society is no exception to it. Jahoda (1969) has given detailed description of the superstitions prevalent in England, United States, Germany, France and Italy.

In India a large variety of superstitions prevail. They are related to religious, astrological and social aspects of the different parts of the country. Stories related to gods, fairies, ghosts and evils are very common in Indian societies. Various forms of *tantra*, astrology, religious dogmas and fortune telling have special voice in Indian. Besides, a number of superstitions from the view point of auspicious and inauspicious and future predictions continue in our social life. In short, overwhelming majority of Indian population carry superstitions of various sorts. Whether we admit it or not the fact is that we observe different rituals concerning birth, marriage, and death. The students are no exception. A few studies have shown prevalence of superstitions of various kinds among the Indian students (Kline, 1974).

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Personal factors like age, education and sex influence the development and manifestations of superstition in important ways. However, findings in this regard present some interesting picture.

Thouless and Brown (1964) have found a decrease in superstitions belief with increase in age. But Kline (1975) did not find any significant effect of age on superstition among Indian students. Jahoda (1970) reported that subjects aged 25 and above score lower on 'index of superstitions beliefs' than the younger subjects. But when Gupta (1969) compared superstitions of six different age groups, ranging from 15 to 60, he noticed no significant difference between the superstitions of different age groups. Howevet he found the age group of 45 to 60 years to be most superstitions.

As regards education, research findings have generally confirmed that it has modifying effect on superstitions beliefs. Earlier studies of Lehman and Fenton (1929), Valentine (1936), and Zapf (1938) showed that undergoing a course of psychology reduced the superstition and misconception of students considerably. Similarly, in recent years Za'vour (1972), Gupta (1969), Aldrich, Lipman and Goldman (1975). Blum and Blum (1974) Chandershekhar *et al* (1982) and many others on the basis of their studies have concluded, that superstition decreases with increases in education.

It is a general notion that females are more superstitions than the males. This was first reported as early as in 1887 (Conkiin, 1921). Later this was confirmed by Plug (1976), Blum (1976), Scheidt (1973), Liddell and Morgan (1978) and Chandrashekhar *et al*, (1982)' However certain studies have failed to find any difference in the amount of superstition between male and female subjects (Bhagwat and Verma, 1973; Opolot, 1981).

Thus the review of relevant studies indicates a good deal of conflicting findings on the background factors of superstition. This may be because of certain obvious variations and limitations of the studies. The studies have been done on samples drawn from varied socio-cultural background. Secondly, the interacting personal factors have not been properly controlled or partialed out in many studies. Thirdly, measures of superstition vary from study to study and in many studies the instruments used have been far from being psychometrically sound. Taking all these limilations into account, the present study aims to ascertain the effects of sex and faculty of study on superstition of college students reading in *Bhojpur* area in Bihar with the help of an objective test of superstition.

METHOD

Sample : As the study aimed to verify whether superstition among students was a function of their sex and faculty of study, other personal factros like age, level of education and residence were kept under control. The students included in the sample were all undergraduate students reading in two colleges (one women's college and the other primarily a men's college) located in the same town, of Arrah in Bhojpur belt (Bihar). The age of the subjects ranged from 15 to 22 years with mean 18.87 years and SD 2·248. Taking two levels of sex (male and female) and two levels of faculty of education (Arts and Science) , the study was conducted in 2×2 factorial design. In all 400 cases were included in

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the sample, of which 200 were boys and 200 girls. In each sex group, 100 cases were from the Faculty of Arts and remaining 100 were from the Faculty of Science. The exact cases in the sample were drawn by stratified random technique.

Tests : Apart from a Personal Data Sheet to obtain information regarding age, education, sex, caste, religion etc. of the subjects, a Superstition Scale developed and standerdized by the researchers was used to measure subject's degree of superstition. The S-Scale contained 54 items on the following five dimensions of superstition-religious, astrological, luck and fate, sorcery, magic and ghosts, and social and personel superstitions. Each item was provided with two alternative responses of "Agree" and "Disagree". The subject had to encircle the response true for him. Every "Agree" response to a positively worded item and "Disagree" response to a negatively worded item was scored as one. Thus the possible scores on the S-Scale ranged from 0 to 54, higher score indicating greater superstition on the part of the subject. The internal consistency coefficient of the S-Scale as found by the researcher was ·70 (N=100), and temporal stability coefficient with four weeks interval as .62 (N=50). Thus the test possessed fairly high reliability. The Scale was validated against judges' rating and its construct validity was also ensured (Bhushan, 1985).

RESULT AND DISCUSSION

The responses obtained from the subjects on the S-Scale were scored and the data were subjected to statistical processing (Table-1)

Table-1 : Superstition Score of the four groups.

Groups	N	Mean S-Score	S. D,
AGS*	100	25·25	12·25
SGS*	100	17·25	12·07
ABS*	100	18·90	12·96
SBS*	100	16·55	11·57

*AGS=Arts Girl Students, SGS=Science Girl Students, ABS=Arts Boy Students, SBS=Science Boy Students.

It is evident from Table 1 that the girls of the Arts faculty (AGS) have scored highest (M=25·25) on the superstition Scale and the boys of the Science faculty have scored the owest (M=15·55). The remaining two groups, i. e., SGS and ABS have scored in betwleen these extremes. Although the SDS of these groups range from 11·57 to 12·96 indicating wide fluctuation in superstition scores, still they indicate that subjects of either sex reading in the Faculty of Arts have scored higher in superstition than those reading in the Faculty of Science. Faculty remaining the same, the girls have manifested more superstition than the boys. In order to see whether the four group means differed significantly, one way ANOVA and t-test were applied. The results are summerized in Tables 2 and 3.

Table-2 : Results of ANOVA for Superstition score of the four groups.

Sources of Variance	df	Sum of Squares	Mean variance	F	p
Between Groups	3	4489.19	1496.40	12.43	.001
Within Groups	396	47693.25	120.44		

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Table-3 : *t*-values obtained in relation to Superstition Score of four groups of Students.

Groups	SGS	ABS	SBS
AGS	4.39**	3.85**	4.86**
SGS	—	0.37	0.57
ABS	—	—	0.91

**Significant beyond .01 level.

The results of ANOVA given in Tables-2 indicate that the obtained *F* is significant beyond .001 level and thus the four groups differ significantly in their superstition score. Table-3 showing the *t*-values obtained in relation to the difference between the four group means confirms that the girls reading in the Faculty of Arts (AGS) have scored significantly higher in superstition ($p < .01$) than either of the remaining three groups. But the comparison between the means of the other three groups (SGS, ABS and SBS) has yielded all insignificant *t* values. This suggests that sex and faculty of study interact in important and interesting ways to influence superstitious beliefs of college students. Study of science does reduce superstition among students and this has a sharper modifying effect among the college girls. The results confirm the earlier findings of Kline (1974) and Za'vour (1972) that girls reading in Arts faculty are most superstitious. The results give an encouraging indication that education in Science has contributed to rational thinkimg and objectivity among students and has manifested in their lower superstition score.

However, the results do not lend any strong support to the generalised contention that girl students are definitely more superstitious than the boys e.g. Blum, 1976). Buhrmann and Zangg. 1981 ; Chandrashekhar *et. al*, 1982 ; Liddell and Morgan, 1978). While the Arts Girl students have scored significantly higher in superstition than the two groups of boy students, the Science Girl students (SGS) have scored similar to the boy students. In fact the SGS has scored (M=17.25) slightly lower than the Arts Boy students (M=18.90). But since the *t* values are all statistically insignificant, we may say that the differences between the three means are just a matter of chance. What makes the girls more sensitive and receptive to the input of formal education than the boys, is a matter of careful consideration and depth study. A few earlier findings have also suggested comparatively sharper effect of education among college girls in respect of authoritarianism and religiosity than their boys counterparts (Bhushan, 1967 : Bhushan and Sinha, 1971). This may be because of some revolting feeling among the educated girls regarding their gender stereotyped roles (Dickstein, 1982 ; Sharan, 1977) and relatively greater involvement and sincerity in their study than the boys) because of their less participation in external affairs of the social set-up.

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Effect of certain Demographic Factors on the Intelligence of Fifth Grade Girl Students.

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and Dr. (Mrs.) M. B. Singh***

INTRODUCTION

Intelligence is generally considered as the ability of an individual to learn and adapt to new environment. The term intelligence is used to explain the difference in the mental ability that are the product of age and maturation. Thorndike, *et.al.* (1972) have listed, under the heading of intelligence, a wide variety of operations such as attention, retention, recall, recognition, selective and rational thinking, abstraction, generalization, organization, inductive and deductive reasoning, together with learning in general.

Intellgence is a trait influenced by both heredity and environment. Heredity is not in our hands, we can work only through and with environment. From the past few decades emphasis on intelligence studies is to see its relation with different consituents of environments. Bloom's evidence (1964) suggests that early environment is of crucial importance for the optimum development of child as the environment exercises its greatest effect during this period. He explained that 80% of an individuals intelligence takes place by the age of eight years. Weschler (1958) states that intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal efficiently with his environment. An intelligent person is one who not only can master a greater number of tasks and solve problems with greater speed but also is able to perform harder tasks such as solving a mathematical problem. Mental development leads the child towards greager awareness of world around him (Sharma 1975). Evidence is available to suggest that combined influence of social, environmental, economic, emotional and genetic factors are decisive pertaining to mental development. there is a need to determine the extent to which these factors affect the early development of the child. It is in this perspective the investigators have, therefore tried to study the impact of certain demographic factors on the intelligence of fifth grade girl students.

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Objectives :—The following were the specific objeceves of the study—

1. To identify and determine differences in the intelligence of fifth grade ggirls.
2. To determine the effectof certain demographic factors on the intelligence. fifth grade girls.

Hypotheses :- The following hypotheses were framed—

1. There are no significant differences in the intelligence of fifth grade girls whose mothers are more educated and less educated.
2. There are no significant differences in the intelligence of fifth grade girls whos fathers are more educated and less educated.
3. There are no significant differences in the intelligence of fifth grade girls who are coming from small families and large families.
4. There are no significant differences in the intelligence of fifth grade girls whose fathers are in service and in business.
5. There are no significant differences in the intelligence of fifth grade girls whose mothers are employed and non-employed.
6. There are no significant differences in the intelligence of fifth grade girls who are coming from joint and nuclear famiiies.

METHODOLOGY

Selection of Respondents :- The respondents in the present study were from the recognized schools of Ludhiana city. From the list of schools, two schools were randomly selected. Fifth grade girl students were enrolled in this study. The total sample consisted of 100 students. Fifty each grade girl students were randomly selected from the two schools.

Description of the Instrument :- To measure the intelligence of fifth grade girl students Raven's coloured Progressive Matrices was used. The Coloured Matrices are desigred for use with young children. The scale as a whole can be described as "a test of observation and clear thinking". Each problem in the scale is really the source of a system of thought, while the order in which the problem are presented provides the standard training in the method of working. The coloured Matrices make it possible to explore the psychological significance of observed discrepancies between a persons present capacity for productive thinking and his recall of information. This test was given in a group of ten students. The minimum score was zero and the maximum thirty six.

The personal information sheet was designed to collect the information regarding, mother's education, father's education, family size, father's occupation, type of family, employment of mothers and birth order of students.

RESULT AND DISCUSSION

On the basis of the data, the background characteristisc of the respondents are presented in Table-1

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Table-I : Background Characteristics of fifth grade students,

Chracteristics	Number	Percentage
1. Mother's Education		
Below Matric	55	55
Matric and above	45	45
2. Father's Education		
Below Matric	43	43
Matric and above	57	57
3. Size of family		
Small family (with three sibling)	26	26
Large family (more than 3 sibling)	74	74
4. Father's Occupation		
Service	35	35
Business	65	65
5. Type of family		
Joint	37	37
Nuclear	63	63
6. Mother's occupation		
Employed	34	34
Non-employed	66	66

The results of the statistical analysis of the data are presented in Table II-VIII. Each hypothesis as proposed in objectives has been analyzed statistically followed by conclusion of findings as below.

Chi-square test of independence was employed to adjudge whether the performance of fifth grade girl students on Raven's coloured Matrices were independent of there demographic factors. For this purpose, three groups high intelligence average intelligence and low intelligence were formed. The percentages of subjects belonging to different categories in intelligence were also compared.

Table-II presents the results regarding the differences in the intelligence of fifth grade students in relation to mother's education. The chi-square results reveal that the total scores obtained by students on intelligence test are independent of iheir mother's education ($X^2 = 1{\cdot}063$, $p < {\cdot}01$).

Table-II : Intelligence of fifth grade students in relation to mother's education.

Category	Low Intelligence	Average Intelligence	High Intelligence	Chi-Square
Below Matric	27 (49·09)	17 (30·90)	11 (20·00)	1·063*
Matric and Above	17 (37·77)	19 (42·12)	9 (20·00)	

* Non-significant at ·05 level.

Figures in parenthesis show percentages.

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From the table it is apparent that 20.00 percent students were having highint intelligence scores, 30·90 percent were having average intelligence scores and 49·09 percent were having low intelligence scores whose mothers were less educated. Whereas 20·00 percent were having high intelligence scores, 42.22 were having average intelligence scores and 37·77 were having low intelligence scores. Whereas, Kakkar (1970) found positive relationship between educational level of parents and their socio-economic status to the IQ scores of children.

Table III shows the differences in intelligence of fifth grade girls in relation to their father's education. The results reveal that the total scores obtained by girls on intelligence test are independent of the father's education (X^2=.056, p ⩽ ·01). Therefore, the null hypothesis is not rejected. The intelligence of fifth grade girls is not associated significantly with the father's education.

Table-III : Intelligence of fifth grade girls in relation to father's education.

Category	Low Intelligence	Average Intelligence	High Intelligence	Chi square
Below Matric	17 (39.55)	16 (37.20)	10 (23.25)	·056*
Matric and above	24 (42.10)	20 (35.08)	13 (22.82)	

*Non-significant at .05 level, Figures in parentheses show percentage.

Buzina (1971) considered that educating the parents was beneficial and essential for the improvement in the intelligence of children.

Table IV presents the results regarding the differences in intlligence of fifth grade girls in relation to the size of family. The chi-square results reveal that the total scores obtained by the fifth grade girls on intelligence test are independent of small and large families (X^2=1.028. p⩽ ·01). The null hypothesis, therefore, is not rejected. The intelligence of fifth grade girls is not associated.

Table-IV : Intelligence of fifth grade girls in relation to the size of family.

Category	Low Intelligence	Average Intelligence	High Intelligence	Chi-quare
Small families	9 (34·62)	9 (34.62)	8 (30.76)	1·028*
Large families	32 (43.24)	27 (36.48)	15 (20.27)	

*Non-significant at ·05 level, Figures in Parentheses show percentages.

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significantly with the size of family. Dandes (1969) examined the relationship between intelligence ond family size and density. It was observed that there was negative correlato between family size and density and the measures of intelligence.

Table V shows the differences in intelligence of fifth grade girls in relation to father'soccupation. The results reveal that the total scores obtained by girls on intelligence test are independent of father's occupation. (Chi²=1.051, p⩽ ·01). Therefore, the null hypothesis is not rejected. The intelligence of fifth grade girls is not associated significantly with the father's occupation. Udani *et. al.* (1976) emphasized that social and intellectua stimuli were independent factors in the normal development of a child. These stimuli were usually poor in children of low socio-economic groups which were likely to have an effect on mental development.

Table-V : Intelligence of fifth grade girls in relation to father's occupation.

Category	Low Intelligence	Average Intelligence	High Intelligence	Chi-squar
Service	13 (37.14)	13 (37.14)	9 (25.71)	1.051*
Business	28 (43.07)	23 (35.38)	14 (21.53)	

*Non-significant at .05 level. Figures in parentheses show percentages.

Table VI presents the results regarding the differences intelligence of fifth grade girls in relation to the mother's employment. The chi-squre results reveal that the total scores obtained by girls on intelligence tests. Are independent of their mother's employment (Chi²=·477, $p<·01$). The null hypothesis, therefore, is not rejected. The intelligence of fifth grade girls is not associated significantly with mothers occupation.

Table-VI : Intelligence of fifth grade girls in relation to mother's employment

Category	Low Intelligence	Average Intelligence	High Intelligence	square
Employed	12 (35·29)	14 (41·17)	8 (23·35)	·477*
Non-employed	29 (43·93)	22 (33·33)	15 (22·72)	

* Non significant at ·05 level. Figures in parentheses show percentages.

Table VII presents the result regarding the dfferences in intelligence of fifth grade girls in relation to the type of family. The chi-square results reveal that the total socres

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obtained by the fifth grade girls of family they belong (X^2=0·312, p<·01). The null hypothesis, therefore is not rejected. The intelligence of fifth grade girls is not associated significantly with the type of family. From the table it is appartment that 22·22 percent

Table-VII : Intelligence of fifth grade girls in relation to type of family

Category	Low Intelligence	Average Intelligence	High Intelligence	Chi-square
Nuclear	26 (41·26)	23 (36·50)	14 (22·22)	0·312*
Joint	15 (40·54)	13 (35·13)	9 (24·32)	

*Non-significant at ·05 level, Figures in parentheses show percentages.

of girls were having high intelligence scores, 36·50 percent were having low intelligence and 41·26 percent were having intelligence scores who were coming from nuclear families, Whereas 24·32 percent were having high intelligence scores, 35·13 percent were having average and 40·54 percent were having low intelligence scores who were coming from joint families. It is, therefore, concluded that the type of family does not have influence on the intelligence of girl students.

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A Comarative Study of Job Satisfaction Level of Employees of Nationalised and Non-nationalised Banks

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INTRODUCTON

The efficiently of a worker is dependent on a number of factors related to his work and working conditions. If his attitude towards these factors and conditions is positive, his efficiency will definitely be greater than that of one who has negative attitude. Psychologically, the attitude that a person has towards the different factors of his job is termed as 'job satisfaction'.

The studies done in the area of 'job satisfaction' make it clear that the individuals satisfied with their jobs enjoy better mental health than those who are less satisfied (Gilmer 1961., Harrell, 1964, Pestionjee, 1967 and Sinha and Agrawal 1971). An organization can benefit materially by knowing the job satisfaction of its workers (Blum, 1956). Studies related to 'job satisfaction' can also lead to a more effective functi ning of the individual and the organization as a whole (Sinha, 1972). Whereas dissatisfaction with the working conditions may be one of the factors of unrest and strikes in various institutions.

The banking institutions were established by the private owners with their own managenent. This process of banking institutions adopted their own way of appointing, promoting favouring and di sfavouring the workers. This dessatisfactlon with the private management demanded a change. Due to this demand some of the banking institutions have been taken under State ownersship, or in other words, they were nationalised. Under this scheme of 'nationalisation, 20 banks were nationalised or taken under state owrersh p. Thus, now there are two types of banks, nationalised, and non-nationalised, banks these two types of banks may provide differens types of working conditions, facilities, and security of services, and in psychological terms may provide different levels of 'job satisfaction' to their employees. It is an acknowledged fact that 'man does not live by bread alyne. But .....men want to be happy and contented in the earning of their pay (Lawshe, 1953). In other words "employees must derive some degree of satisfaction from their job". (Lawshe, 1953) Thus, it becomes essential for every organisation to know the level of job satisfaction of its employees.

With this intention the following research problem was formulated for the present study.

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"A comparative study of job satisfaction level of employees of nationalised and non-nationalised banks".

METHODOLOGY

Hypothesis—(1) The employees of the nationalised and the non-nationalised banks will not differ significantly on the scale of job-satisfaction.

(2) The officers of the nationalised and the non-nationlised banks will not differ significantly on the scale of job-satisfaction.

(3) The clerks of the nationalised and the non-nationalised banks will not differ significantly on the scale of job-satisfaction.

Sample—The sample for the present study was selected by using the convenience method of non-probablity sampling tachnique. The field of the present study was restricted to the nationalised and the non-nationalised bank employees of Lucknow. The sample distribution of the present study was as below—

Table-1 ; Showing the sample Distribution of the study.

Employees	Nationalised Banks	Non-nationalised Banks	Total
Officers	25	25	50
Clerks	25	25	50
Total	50	50	100

Tool—The level of 'job satisfaction' of employees of nationalised and non-nationalised banks was measured by using 'Job Satisfaction Instrument' constructed and standardized by Mishra, Tiwari and Pandey. (Published by Agra Psychological Research Cell Tiwari Kothi Belarganj Agra)

RESULT AND DISCUSSION

The results obtained in this study are presented below—

Table-2 : Showing Mean Satisfaction Scores of Employees of Nationalised and Non-nationalised Banks.

Employees	Mean Satisfaction Score
Nationalised Banks	130·42
Non-Nationalised Banks	128·94
F-Value	·165 Not Significant

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Table-2 : makes it clear that the mean satisfaction score of employees of nationalised banks is higher (130. 42) than that of the non-nationalised banks. But the difference between these two means is not significant as the value of *F* (·165) is less than the required value of *F* at ·05 level of significant. Thus, the hypothesis no. 1 is upheld on the basis of the results of this study. This shows that the nationalisation of banks has not increased the level of satisfaction of employees.

Table-3 : Showing Mean Satisfaction Score of Officers of Nationalised and Non-Nationalised Banks.

Officers	Mean Satisfaction Score
Nationalised Banks	138·60
Non-Nationalised Banks	135·00
F-Value	·76 Not Significant

The perusual of table no. 3 clears that the mean satisfaction score of officers of nationalisd Banks is higher (138·60) than that of the non-naticnalised banks, but the difference between these two means is not satistically significant as the value of *F* (·76) is less than the required value of *F* at ·05 level of significance. Thus, the hypothesis No. 2 is upheld on the basis of the results of this study.

Table-4 : Showing the Mean Satisfaction scores of Clerks of Nationalised and Non-Nationaiised Banks.

Clerks	Mean Satisfaction Score
Nationalised Banks	122·24
Non-Nationalised Banks	122·88
F-Value	·014 Not Significant

A perusal of table No. 4 makes it clear that the mean satisfaction score of clerks of nationalised banks (122·24) is less than that of the non-nationalised banks (122·88), but the value of *F* (·014) shows no significant difference. Thus, on the basls of the resu lts of this study, the hypothesis No. 3 is also upheld.

On the basis of all the three results, it can be concluded that the job satisfaction level of employees of the nationalised and the non-nationalised banks do not differ significantly. The possible reson for this phenomenon is that there are merits and demerits in both types of bank managements i. e., private owned and state owned, and these marits and demerits of these two types of banks management counter-balance the net result. Thus, level of job satisfaction of employees of both types of banks remain almost at the same level, inspite of this change.

Thus, the results of this study show that the nationlisation has not significantly increased the level of job satisfaction of bank employees. However, the higher mean job

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satisfaction score (130·42) of the employees of nationalised banks indicates that nationalisation has a little, if any, impact on the job satisfaction level of its employees. It can be presumed on the basis of this trend that in the long run nationalisation may lead to a higher level of job satisfaction and thus will ultimately lead to an increase in the efficiency as has been found in a number of studies done in other areas.

CONCLUSION

The main conclusion of this study is that the nationlised and the non-nationalised banks do not differ significantly on the scale of the job satisfaction.

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A Comparative Study of the Personality of the Job Satisfied and the Job Dissatisfied Teachers as Measured by Factors A, C, E, H, L, and Q_4 of 16-PF.

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INTRODUCTION

The present society is be set with unrest. A person, whether working in industry, education or elsewhere, does not appear to be satisfied with his working environment and facilities in conditions of work. However, improvement in conditions of work in itself is insufficient without increase in the satisfaction level of the employees. The level of satisfaction is affected by a number of factors, such as working conditions, salary, securty, of job employers and supervisors, and the personality of the worker himself. Erom the perusal of the studies conducted by Hoppock (1935 b), Smith,(1936), Cain (1942), Newman (1952), Ash (1954), Hernon (1955), Guha (1965), Mehdi and sinha (1971) and Watson (1976), it can be safely said that the satisfaction-dissatisfaction is highly related with the personality of the workers.

Together with workers in other fields the teachers working in present day schools are also giving definite indications of their dissatisfaction with the work environment in the form of recurring strikes on one pretext or the other. This has become one of the very serious problems for educational units in the present day society. The lowering down of the standared of education may be due to the fact that the teachers have no satisfaction with their work.

The teachers satisfied with their job are likely to have different personalies as compared to these who are dissatisfied with their job. Since the teacher's personality has a central role in the interactional process of education, and if any difference in their personalities can be established, we can rander a great service to the cause of eduction. An invesitigation into the personality characteristics of the satisfied and the dissatisfied teachers will help the selectors to opt for the persons who have a higher level of satisfaction with their job.

Objectives : The main aim of the present investigation is to study the difference between some of the personality traits of the satisfied and the dissatisfied teachers.

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METHOD

Samples.: The sample for the present study was selected from the higher secondary schools of Agra district. In all 650 teachers were given Job-satsfction Questionaire. Out of these 650 teachers 188 (above Q_3) were satisfied and 165 (below Q_1) were dissatisfied. Out of these 188 satisfied teachers and 165 dissatisfied teachers, 100 satisfied and 100 dissatisfied teachers were selected using stratified random sampling technique.

Tools : (1) Job Satisfaction Questionnaire (JSQ) by Kumar and Mutha (1973) was used for spotting out the job satisfied and job dissatisfied teachers.

(2) 16-PF Questionnaire constructed by Cattell and Eber and as adopted in Hindi by Kapoor, was used for measuring the personality of the job satisfied and the job dissatisfied teachers.

RESULTS

The following table shows the means of satisfied and dissatisfied teachers on factors A, C, E, H, L, and Q_4. Analysis of variance was computed to test the differences between the means of the satisfied and the dissatisfied teachers on each of the factors.

FACTORS	MEANS		*df*	*F*	Level of Significance
	Satisfied Teacher	Dissatisfied Teachers			
A	9·07	10·30	1/198	9	·01
C	14·16	11·11	1/198	26·73	·01
E	11·14	13·67	1/198	26·63	·01
H	13·41	15·49	1/198	8·58	·01
L	9·29	11·57	1/198	32·49	·01
Q_4	9·83	12·16	1/198	21·72	·01

F value at 1 and 198 *df*=3·89 at ·05 level, and 6·76 at ·01 level.

DISCUSSION

Factor A : (Reserved *V/s* Outgoing)

The means of the satisfied and the dissatisfied teachers on this factor are 9·07 and 10·30 respectively. The difference between these two means is significant because the derived *F* is greater than *F*-value required at ·01 level.

The low mean of the satisfied teachers shows that they tend to be reserved, detached critical and cool. They like things rather than people, working alone, and avoiding compromises of viewpoints. The are likely to be precise and rigid in their way of doing things and in personal standards.

The high mean of the dissatisfied teachers shows a greater probability of their easygoing, emotionally expressive, ready to cooperate, attentive to people, soft hearted, kindly, adaptable. They may readily form active groups, be generous in personal relations, be less afraid of criticism. All these characteristics of the dissatisfied techers indicate a probability of interaction with their friends and colleques, and they remain busy in other things than their job.

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Factor C : (Emotionally less stable *V/s* Emotionally Stable).

On this factor the satisfied and the dissatisfied teachers have mean scores 14·16 and 11·11 respectively. The difference between these two means is significant because the value of *F* is much greater than the required value of *F* at ·01 level.

The high mean of the satisfied teachers shows that they tend to be emotionally mature, stable, realistic about life, unruffled, possessing ego-strength, and better able to maintain solid group morale. The low mean score of the dissatisfied teachers shows that they have the high chances to be low in frustration tolerance for unsatisfactory conditions, changeable and plastic, evading necessary reality demands, neurotically fatigued, fretful, easily emotional and annoyed, active in dissatisfaction, having neurotic symptoms. These characteristics of personality may make a person disturbed, lower down his adjustment, and hence he may become dissatisfied with his job.

Factor E :—(*Humble V/s Assertive*)

As regards to Factor E, the mean of the satisfied teachers was found to be 11·14 while the mean of the dissatisfied teachers was 13·67. The obtained value of *F* is 26·63 which is much greater than the required value of *F* at ·01 level and hence it shows a significant difference between these two means.

The low mean side of the satisfied teachers shows that they have a tendency to be humble, mild, accommodating and conforming. They may easily submit to others' requests and demands. They may often be dependent, confessing, anxious for obsessional correctness. They may try to adjust themselves according to the new environment; they never express hostility or extrapuntive feeling. The high mean of the dissatisfied teachers indicates a greater probability to be assertive independent, aggressive, dominant and stubborn. They tend to be austere, hostile, authoritarian, and may disregard authority. Due to these personality characteristics the dissatisfied teachers may find it difficult to adjust with changing environment.

Factor H : (*Shy V/S Venturesome*)

With regard to factor H the dissatisfied teachers scored high (15.49) as compared to the satisfied teachers (13.41). The value of *F* is 8.58 which is greater than the required value of *F* at ·01 level, and hence the difference between these two means is significant.

The low mean direction of the satisfied teachers indicates that they may be shy, withdrawing, cautious, retiring. They usually suffer from inferiority complex. They tend to be slow and impeded in speech and in expressing themselves, prefer one or two close firends, and are not given to keeping in contact with all that is going on around them. The high mean of the dissatisfied teachers shows that they may be venturesome, socially bold, uninhibited and spontaneous. It may be due to their social boldness and uninhibitedness that they oppose their authority and speak out whatever comes to their minds. They always try new things and are abundant in emotional responses. The may be careless of details, ignore danger signals, and consume much time in talking. All these personality characteristics of the dissatisfied teachers may help to develop negative attitudes towards the different aspect theirs of job.

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Factor L :—(*Trusting V/s Suspicious*)

On this factor the mean scores of satisfied and dissatisfied teachers are 9.29 and 11.57 respectively. The difference between these two means is significant because the obtained value of *F* is 32.49 which is much greater than the required value of *F* at .01. level.

These means indicate that the satisfied teachers may be trusting, adaptable, free of jealous responses. They tend to be cheerful, uncompetitive, concerned about other people and good team workers. On the other side, the dissatisfied teachers tend to be suspicious, self-opinionated, hard to fool and mistrusting. They are often involved in their own ego. They are usually deliberate in their actions, unconcerned about other people, and poor team workers.

Factor Q_4 :—(*Relaxed V/s Tense*)

On factor Q_4 the means of the satisfied and the dissatisfied teachers are 9.83 and 12.16 respectively. The calculated value of *F* 21.72 indicates a significant difference between these two means at .01 level.

The lower mean of the satisfied teachers indicates that they tend to be relaxed, tranguil, unfrustrated, torpid and composed. In some situations, their oversatisfaction can lead to laziness and low performance, in the sense that low motivation produces little trial and error. The high mean of the dissatisfied teachers shows that they may be tense, excitable, restless, fretful, impatient. Their performance may be disrupted due to high level of frustration. They are often fatigued but unable to remain inactive. In group they take poor view of the degree of orderliness, unity and leadership. Their frustration represents an excess of stimulated but undischarged drive. Their tense state of mind may be responsible for their bent to activities of indiscipline, as a corallary to their dissatisfaction with the job.

The above discussion shows that the satisfaction or the dissatisfaction of the teachers is likely to be the function of their personality makeup. This should not mean that personality make-up is the only cause for the satisfaction or dissatisfrction of the teachers. The results of this study simply mean that there are certain personality factors which are more prone to the job satisfaction or dissatisfaction of teachers.

CONCLUSION

The main conclusion of this study is that the satisfied and the dissatisfied teachers differ significantly on Factor A, C, E, H, L, and Q_4 of 16 PF.

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Legal Education as Hierarchical Reinforcement : A Critique of Duncan Kennedy's view of Legal Training*

Roda Mushkta**

Duncan Kennedy, a leading figure in the "Critical legal studies" movement has recently launched a scathing attack on modes of traditional legal education such as those prevalent in Asia. His searching critique is useful in that it challenges orthodox assumption. Nonetheless, many of his claims are open to question and need to be subjected to scrutiny. The aim of the present paper is to point out briefly the shortcomings of Kennedy's thesis and suggest that it cannot provide a firm foundation for the reform of legal training in general, and in Asia in particular.

INTRODUCTION

Duncan Kennedy, Professor at the Harvard Law School, is perhaps the most influential figure in the "critical legal studies" movement. He and his followers have urged consistently and with considerable vigour that traditional legal concepts, methods and practices be examined critically from alternative (i.e., non-establishment oriented) socio-political and normative perspectives. Both Kennedy and the intellectual moevment which he has spearheaded are now a force to be reckoned with in jurisprudence and other branches of the law.

The present writer has some reservations about rigidly defined Schools of legal thought, such as critical legal studies or, for that matter, the "new right" of the Chicago variety (as represented, for instance, by Posner[1] and Calabressi[2]). It may be argued that in some respects such Schools constitute an invitation to dogma and oversimplify and distort reality. It is more desirable to perceive reality as exceedingly complex and thus defying "monocausal" explanations. It is more productive to approach reality from multiple perspectives and endeavour to analyse it in terms oi more elaborate models.

* This article is based on a paper presented at a seminar of the critical legal studies group at the University of Hong Kong and the writer wishes to express her appreciation to the participants for their constructive comments. However, she assumes sole responsibility for the final product.

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In the particular case of critical legal studies, the present writer has an additional reservation. Specifically, it is difficult to avoid the conclusion that much of the work which falls into this category is not of sufficiently high quality. If one compares it, for instance, to the work of new right scholars, such as Posner and Calabresi, the latter may provoke strong disagreement but is at least elegently and rigorously presented. By contrast, the output of critical legal scholars appears to have a superficial quality about it.

Perhaps for this reason many jurists have simply chosen to ignore the ideas emanating from the critical legal studies movement. The temptation to dismiss it completely must, however, be resisted. Critical legal scholars, even when they fail to presuade, serve the useful function of devil's advocates and compel us to question our assumptions. Furthermore, without proper rebuttal those of thier assertions which seem to have little validity may gain greater influence than they apparently merit so that the strategy of ignoring them cannot be recommended.

The article or Duncon Kennedy on the subject of legal education is a case in doint. It is an article which forces on to re-examine prevailing legal educational practices and their philosophical underpinnings. At the same time, it is an article which is seriously flawed and because it has been largely ignored by mianstream low teachers, one which may have been allowed to exert influence on legal thinking on a scale that can hardly be justified. The aim of the present paper, therefore, is to try to counter some of Kennedy's dubious claims.

Kennedy implicitly develops his argument in a Marxist fashion in that the first constructs a "base" and then proceeds to erect a "superstructure." His base consists of two rather dramatic statement : (1) that "law schools are intensely political places" and (2) that they constitute a vehicle for "ideological training for willing service in the hierarchies of the corporate welfare state." Kennedy's superstructure, or other observations, are derived from those two assertions and are less interesting.

The first statement strikes one as less of a dramatic discovery than a rather awkward attempt to belabour the obvious. There is no social institution which is not political in naiure ! (Politics has been defined as the study of "who gets what, when and how" or that of influence).[4] The modern law school is certainly a political institution but so nre all other social institutions. For instance, the family, whether nuclear or extended, is a political institution, presonal friendships are highly political in nature and politics pervades social institutions such as small informal groups, schools, universities, business and profesional entities, religious organisation and recreational clubs. Kennedy's opening statement is, therefore, not particularly illuminating.

The second statement, constilutes arguably an equally awkward attempt at belabouring the obvious. Again, all social systems have elaboorate mechanisms to perform a function described by the emient American Sociologist, Talcot Parsons[5] as "pattern maintenance." In other words, such systems are geareb towards perpetuating the existing socio-economic-poltical patterns by means of various institutioual devices. The Chinese family

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is a case in point. It has managed to maintain its vigour through intensive Confucian-type of socialisation even under prolonged Communist oppression. Neither Mao's Great Leap Forward, nor his Cultural Revolution, have undermined the traditional Chinese family structure because of the powerful in-built cultural mechanisms upon which it relies to perpetuate itself. Thus, to cotend that modern legal education constitutes a from of idealogical training in the hierarchies of the corporate welfare state is neither original nor profound.

At the same time, it sould be noted that no social system is entirely successful in perpetuating itself. No social system is immune to change. Even the Chinese family is undergoing change in the face of changing socio-economic circumstances. Even such a tightly-controlled regime as that of Baby Doc Duvalier in Haiti has collapsed in the wake of internal pressure. Even a monolithic communist state such as the People's Republic of China (PRC) is subject to internally and externally induced change. Regimes described by Kennedy as "corporate welfare states" are enen less adept at controlling change than their authoritorian counterparts. A telling example is the massive nationalisation afeter the Second world war in the United Kingdom by the Labour Government and the present massive denationalisation by the Thatcher Government. Such radical shifts in policy indicate that the control mechanisms employed to sustain the so called "corporate welfarism" are somewhat fragile.

Given this observation, we have perhaps to ask ourselves not whether the modern law school is an iustrument of the political status quo, whstever it may be, but to what extent it serves as such. The present writer's personal opinion is that it is less than a perfect tool of political control. The very fact that someone like Kennedy enjoys a status of a tenured and full professor in one of the leading law schools in the legal capitalist world, and is free to advocate views which are anathema to the legal and political establis ment, demonstrates that the system of which he is critical is less efficiently conrtolled than he claims. This system is also apparently more tolerant of internal challengesthan any other that we empirically know. It is fair to say that someone with Kennedy's disposition would not have been allowed to prench his message in an authoritarian environment.

Inspite of these reservations, the present writer wishes to stress that she agrees with cennedy that the law is not an independent force but a product of political processes. By implication, she also agrees that legal education, like any other from of education, is political education, and that legal reasoning, like any other from of reasoning, is political reasoning. In other words, the presesent writer has no strong misgivings about the following fundamental assertion of Kennedy :

"Teachers teach nonsense when they persuade students that legal reasoning is distinct as a method for reaching correct results from ethical and political discourse in general (i. e., from policy analysis). It is true that there is a distinctive lawyers' body of knowledge of the rules in the rules, in force. It is true that there are distinctive lawyers' argumentative techiniques for spotting gaps, conflicts and ambiguities in the rules, for arguing broad and narrow holding of cases, and for generating pro and con policyargu ments. But these are only argumentative techniques. There is never a 'correct legal solution' that is other than the correct ethical and political solution to that legal roblem."[7]

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What the present wirter does object to about this statement is, as previously indicated, the attempt to present as a profound revelation an arguirent which is so obvious that it does not call for any further con ment. She also disagrees with the inference that, because law is an extension of politics, legal education and reasoning are in no way unique. Economic and sociological education and reasoning, for instance, are also political in nature but not to say that nothing distinguishes them from their legal counterparts. Once we accept that law is indeed an extension of politics, the question arises : where do we go from there ? Unsurprisingly, this is a question that Kennedy chooses conveniently to evade. He may imply that there is some kind of a non-hierarchical utopia which presents a viable alternative to the corporate welfare state model that Western legal education is supposed to underpin, bul neither in this article nor in way of his other writing does he unequivocally suggest what might be the desirable solution.

In the present writer's humble opinion such an alternative does not ezist. All complex social systems are inherently hierarchical in nature. Even the Israeli Kibbutz, which probably approximates socialist utopia more than any other complex social system, is a social system, is a socially stratified society according to contemporay sociologists and anthropologists.[8] The corporate welfare state which is the subject of Kennedy's strident critique is no exception in this respect. Be that as it may, it is legitimate to argue that it is far less rigidly startified than the author' n alternatives.

Furthermore, even if completely nc erarchical forms of social organisation were feasible, it would still be valid to question whether equality of participation and outcome should be the sole societal objective. Many people value efficiency as well as equality and some trade off is necessary between these two objectives. A just society may be an inefficient one, and *vice versa*, so that a compromise is normally called for. Kennedy, of course, is oblivious to the question of value reconciliation. Unlike Kennedy, the present writer is not inclined to regard social hierarchy as a purely negative factor. Rather, she believes that, at least in "small doses," it may also serve as a safeguard against tyranny. The few historical examples which offer some insight into the possible effects of disposing with social hierarchy, such as Kampuchea under the Khmer Rouge and the PRC under Mao, suggest that attempts to eliminate social hierarchy lead often to dictatorial rule coupled with widespread oppression.

As the present author sees it, we are not presented with a choice between hierarchical social systems and non-hierarchical ones. The choicet is confined to one hierarchy versus another. Do we opt for the authoritarian type of hierarchy or the one associated with what Kennedy portray as a "corporate welfare state" and the psesent writer prefers to call a "semi-competitive capatalist liberal democracy". She personally has no hesitation in opting for the latter and engaging in legal education which reflects this particular form of hierarchical politics, although she does not necessarily condone all related legal practices. She is also glad that shn does not have to teach law or any other political subject in an authoritarian environment. It was not necessary to address oneself to the several specific points which Kennedy develops and which are essentially an extension of the basic premises upon waich the entire facade rests. Because the foundation of the whole argument is so weak, so is the superstructure. It should be merely noted that we are offered a string of unsubstantiated assertions (e. g. "Law school, as an extension of the educational system as a whole teaches students that they are weak, lazy, incompetent and insecure") without any shred of supporting empirical evidence. It is a dubious practice to produce a menu of such

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strong propositions without testing empirically at least those which are potentially testable (e. g. one could by means of established research methods try to measure the authority steucture in schools of law, decision flow patterns there, autonomy enjoyed by staff and students, and so forth).

Kennedy's contribution is disappointing not only because of his questionable and unsubstantiated assertions but also because he fails to provide any meaningful blueprint for action. As noted by one reviewer, he does not furnish any concrete idias on "how he has translated his insights and deep hostility to hierarchy into his own classroom. Does Kenney in fact behave differently from his colleagues ? If so, how and with what results."

What are the present writer's own ideas abut legal education in the context of the "corporate welfare state?" For what it is worte, she does not support any particular model of legal education. She believes in pluralism. To paraphrase the late Chairman Mao : we should allow a hudred flowers blossom and a hundred of schools throngh contend and tolerate different models of legal education as represented, for instance, by the extremes of Chicago (new right) and Antioch (new left) law schools. In other words, in many non-authoritarian environments it would do not harm to have, in addition the tradition type of a school of law, an institution similar in its orientation to the Antioch law school —— that is, an institution which promotes contesvailing rather than pro-establishment values. The resultant dialectical tension between traditional and alternative modes of legal education might possibly bring us closer to the objective of transmitting legal values in a more acceptable manner.

NOTE

See for example : R. A. Posner, *Economic Analysis of the Law.* (Boston : Little-Brown, 1972); R. A. Posner, *The Economic of Justice* (Combr dge, Ma. : Har-, vrad University Rress, 1981).

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S Levinson, "Escaping Liberatism," *Harvard Law Review* 96 (April 1983) : 1486. See also : R. Unger, "The Critical Legal Studies Movement," *Harvard Law Review,* 96 (January 1983) : 561-675; A. C. Hutchinson and P. J. Monahan, "Law, Politics and the Critical Legal Scholars." *Stanford Law Review* 36 (January 1914) : 199—245; P. E. Johnson, "Do You Sincerely Want to be Radical ?" *Stanford Law Review* 35 January 1984) : 247—291: E. Sparer, "Fundamental Human Rights, Legal Entitlements and the Social Sturggle, "*Stanford Law Review* 36 (January 1984): 509—574; D. Trubek, "Where the Action Is "*Stanford Law Review* 36 (January 1984,: 575—622; A. Hunt, "The Lheory, Method and Politics of Critical Legal Theory, "*Bulletin of the Australian Society of Legal Philoshophy* 32 (September 1985) : 26—68; M. Krygier, Critical Legal Studies and Social Theory, "*Bulletin of the Australian Soctiey of Legal Philosophy* 35 (December 1985) : 286—297.

See in this connection : *The Economist* (February 1986). 36.

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An Evaluation of Environmental and Symptomatic Variables in Child-rearing

Dr. Thakorlal C. Mistry and Dr. Arvindrei N. Desai

INTRODUCTION

The purpose of this study is to provide an evaluation of various important problems connected with child-rearing. * This study deals with the case histories of a group of school children. It is concerned with the possible significance and interpretation of the categories used in the history as narrated by each mother as a guide in isolating the essential nature of the problems. This part of the study deals with one particular aspecst of the psychological dynamics of family elationships, namely the mother-child relationships. Previous experience in social relationship may effect not only that decisiveness of responses to socially relevent stimuli but also the content of these responses.

Methodology : The nature of these difficulties of 60 children can be judged by an examination of Table-1. Some children were referred for more than one difficulty, the number of problems exceeds the number of cases.

Table-1 : FREQUENCY OF PROBLEMS

Problem	Frequency
Temper tentrums	11
Disobedience	10
Excitability	20
Fear of animal	20
Fear of water	12
Lack of discipline	10
Fear of Father or Teacher	20
Fear of darkness	18
Fear of examination	20
Fear of sound	12
Fear of ghost	18
Muscular incordination	16
Nail-bitting	18
Quarrelsomeness	12
Habi ties	14

* A study of the Relationship between Maternal Attitude and Mother-Child Interaction with Special Reference to Child-Rearing in an Urban Community. *ICSSR Research Apstract, Quarterly*, Vol, 111, no- 4, 1974.

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This is a Quantitative study of student's problems studying in Standard I, II, III from English-speaking schools of Ahmedabad. The body of some data is taken from the main study, the author's investigation on maternal attitude.* In this study, the method adopted includes the use of a control group and problem in environmental conditions and behaviour symptoms. The mothers were interviewed by the author during the course of mother-child interaction.

Age-distribution (Problem' cases).

Age	5	6	7	8	9	10
No. of Cases	5	18	20	8	5	4

Age-distribution ('Control' Group).

Age	5	6	7	8	9	10
No. of Cases	0	30	17	11	1	0

Respective mothers have revealed some past histories of their children besides the information given in two inventories. Information from the histories given by the mother were summarized under certain categories which are quite arbitrary. They were selected as a conveinent means of summarizing the data in a manner consistent with the point of view for which the history form was devised. In recording, a 'positive' entry was made for each child showing difficulty with a particular symptom, difficully being interpreted as more than average."

ANALYSIS OF DATA

These categories were taken while nothing the histories of the children and are grouped under two broad divisions—Environmental and Symptomatic.

The Environmental Group Includes :

(1) Difficulty with father (strict disciplinarian),
(2) Difficult with mother (strict attitude),
(3) Inadequate space in home (for play),
(4) Others (besides the parents) interfering with the discipline in the home (e.g., relatives or friends).
(5) Faulty Disciplinary Procedures on the part of parents (e. g., the excessive use of corporal punishment, parents not consistent, discipline too leniant or too severe, faulty methods of control used, such as putting child in a dark closet).
(6) Unhappy home (e. g., excessive quarrelling, parents not compatible).
(7) Inadequate recreatian.

The 'Sympto natic' Group Includes

(8) Poor health of child, (9) Delayed speech, (10) Fear (11) Anger, (12) Self-assertion, (13) Self-negation, (14) Animal fear, (15) Teacher aversion,

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(16) Bodily movement. (17) Sleeping difficulties, 18) Stuttering, (19) Nail-bitting (20) Other ties.

These differences expressed relative to the frequency for the 'Problem' Group (Column-5, Table-2) show that the greatest relative difference occurs with categories (Difficulties with the father). The order of relative differences for all categories is shown in Table-4. The order of frequencies of 'Positive' recordings is shown in Table-5. For the porposes of comparison, this order is given for both, 'Problem' and Control' Groups. The equality of proportions between 'Problem' Group and 'Control' Group in Environmental and Symptomatic categories has been tested by applying large sample test.

The results are presented in Table-2, Column-6. The proportions are statistically different for items No. 2, 3, 5, 6, 7, 11, 12, 13, and 17 at 1% level of significant and items No. 1, 15 and 18 at 5% level. Furthermore, test reveals that for items No. 4, 3, 9, 10, 14, 16, 19 and 20, there is no significant difference in the proportions between 'Control' Group and 'Problem' Group. The test reveals most of the environmental cases, we tested to differ between the 'Problem' Group and Control' Group.

Table No-2

Categories		'Problem' Group, 60 n_1	'Control' Group 59 n_2	Difference: Problem Control	Difference Problem Frequency	Value of 't'
	ENVIRONMENTAL					
(1)	Difficulty with father	5	0	5	1.0	2.26500**
(2)	Difficulty with mother	14	4	10	0.7	2.5267*
(3)	Inadequate accommodation	20	4	16	0.8	3.6122*
(4)	Other interfering in home	17	9	8	0.5	1.7347*
(5)	Faulty discipline	38	8	30	0.8	5.5671*
(6)	Unhappy home	23	9	14	0.6	2.8424*
(7)	Inadequate recreation	14	2	12	0·8	3.1955*
	SYMPTOMATIC					
(8)	Poor health of child	20	13	7	0.4	1.3797
(9)	Delayed speech	15	10	5	0.3	1.0762
(10)	Fear	14	8	6	0.4	1.1359
(11)	Anger	31	13	18	0.4	3.3556*
(12)	Self-assertion	44	21	23	0.5	4·1427*
(13)	Self-negation	43	19	24	0.6	4.3031*
(14)	Animal fear	20	14	6	0.4	2.3004
(15)	Teacher aversion	9	2	7	0.8	2.1947**
(16)	Bodily movement	26	28	-2	-0.1	0.4523
(17)	Sleeping difficulties	31	9	22	0.7	4.2044*
(18)	Stuttering	12	4	8	0.7	2.1186**
(19)	Nail-bitting	10	7	5	0.3	0.7500
(20)	Other ties	14	9	5	0.3	1.0069
		420	193	231	0.4	

* Significant at 1 per cent level, ** Significant at 5 per cent level.

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Table-3 : Order of Absolute Differences in Frequency.

	Order	Categories	Absolute Difference
(1)	5	Faulty discipline	30
(2)	13	Self-negation	24
(3)	12	Self-assertion	23
(4)	17	Sleeping difficulties	22
(5)	11	Anger	18
(6)	3	Inadequate accommodaties	16
(7)	6	Unhappy home	14
(8)	7	Inadequate recreation	12
(9)	2	Difficulty with mother	10
(10)	4	Others interfering in home	8
(11)	18	Stuttering	8
(12)	8	Poor health of child	7
(13)	15	Teacher aversion	7
(14)	10	Fear	6
(15)	14	Animal fear	6
(16)	1	Difficulty with father	5
(17)	9	Delayed speech	5
(18)	20	Other ties	5
(19)	19	Nail-bitting	3
(20)	16	Bodily movement	2

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Table-4 : Order of Relative Differences.

	Order	Categories	Relative Differences
(1)	1	Difficulty with father	1.0
(2)	3	Inadequate accommodation	0.8
(3)	5	Faulty discipline	0.8
(4)	7	Inadequate recreation	0.8
(5)	15	Teacher aversion	0.8
(6)	2	Difficulty with mother	0.7
(7)	18	Stuttering	0.7
(8)	17	Sleeping difficulties	0.7
(9)	6	Unhappy home	0.6
(10)	13	Self-negation	0.6
(11)	4	Others interfering in home	0.5
(12)	12	Self-assertion	0.5
(13)	8	Poor health of child	0.4
(14)	14	Animal fear	0.4
(15)	10	Fear	0.4
(16)	11	Anger	0.4
(17)	9	Delayed speech	0.3
(18)	19	Nail-bitting	0.3
(19)	20	Other ties	0.3
(20)	16	Bodily Movement	0.1

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Table-5 : Order of 'Absolute Frequencies'.

Order		'Problem' Group	Frequency	'Control' Group	Frequency
		Categories		Categories	
1	12	Self-assertion	44	16 Bodily movement	28
2	13	Self-negation	43	12 Self-assertion	24
3	5	Faulty discipline	38	13 Self-negation	19
4	17	Sleeping difficulties	31	14 Animal fear	14
5	11	Anger	31	11 Anger	13
6	16	Bodily movement	26	8 Poor health of child	13
7	6	Unhappy home	23	9 Delayed speech	10
8	3	Inadequate accommodation	20	4 Others interfering in home	9
9	8	Poor health of child	20	6 Unhappy home	9
10	14	Animal fear	20	17 Sleeping difficulties	9
11	4	Other interfering in home	17	20 Other ties	9
12	9	Delayed speech	15	5 Faulty discipline	8
13	7	Inadequate recreation	14	10 Fear	8
14	10	Fear	14	19 Nail-bitting	7
15	20	Other ties	14	2 Difficulty with mother	4
16	2	Difficulty with mother	14	3 Inadequate accommodation	4
17	18	Stuttering	12	7 Inadequate recreation	2
18	19	Nail-bitting	10	15 Teacher aversion	2
19	15	Teacher aversion	9	18 Stuttering	2
20	1	Difficulty with father	5	1 Difficulty with father	0

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Table-6

Order of Category	Difficulty with mother	Inadequate accommodation	Others interfering in the home	Faulty Discipline	Unhappy home	Inadequate Recreation	Poor helath of child	Delayed speech	Fear	Anger	Self-assertion	Self-negation	Animal fear	Teacher aversion	Bodily movement	Sleeping difficulties	Stuttering	Nail-bitting
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
2	—	·08	·15	·28	-·40	·25	-·04	·04	·22	-·07	-·30	·21	·42	-·01	·02	·25	·03	-·27
3	·08	—	·24	·24	·02	·28	·74	-·09	·15	·15	-·12	·24	·09	·05	-·40	·30	·16	·34
4	·15	·02	—	·15	·19	·52	·56	·33	·09	·02	-·24	·45	·14	·08	·16	-·24	-·10	-·15
5	·28	·24	-·15	—	-·17	·02	·10	·00	·04	·37	-·28	·32	·10	·00	·06	·31	·49	·10
6	-·40	·02	-·17	-·17	—	·62	·31	·16	-·22	·19	-·41	-·17	-·28	·24	·06	·02	·17	·51
7	·20	·28	·02	·02	·62	—	·70	·28	-·12	-·12	-·25	·02	·23	·11	·25	·14	·38	·48
8	-·04	·24	·10	·10	·31	·70	—	·33	·10	-·30	·19	·19	·00	·26	-·24	·25	·04	-·03
9	·04	·09	·00	·00	·16	·28	·33	—	·15	·15	·06	-·07	·27	·05	-·24	·06	·16	·04
10	·22	·15	·04	·04	-·22	-·12	·10	·15	—	-·12	·38	·29	·34	-·22	-·75	·08	-·03	-·46
11	-·07	·15	·37	·37	·19	-·12	-·30	·15	-·12	—	·06	·13	-·08	·45	-·10	-·08	-·03	·10
12	·30	-·12	-·28	-·28	-·41	-·25	-·19	-·07	·29	·06	—	·35	·03	-·28	-·70	-·05	-·11	·10
13	·21	·24	·32	·32	-·17	·02	·19	·27	·34	·13	·35	—	·55	-·23	·30	-·30	-·17	·06
14	·42	·00	·10	·10	-·28	·23	·00	·27	·34	-·08	·03	·55	—	-·23	-·75	·08	-·27	-·47
15	·04	·05	·00	·00	·24	·11	·26	·05	-·22	·45	-·28	-·12	-·23	—	·04	-·04	-·08	-·28
16	·20	-·40	·06	·06	·06	·25	-·24	-·24	-·75	-·10	-·70	-·30	-·27	·04	—	-·63	-·01	·20
17	·25	-·30	·31	·31	·02	·14	·25	-·06	-·08	-·08	·06	-·30	·12	-·04	-·63	—	·22	-·03
18	·03	·16	·49	·49	·17	·38	·04	·16	-·03	-·03	-·11	-·17	-·27	·08	·01	·22	—	·45
19	-·27	·34	·10	·10	·51	·48	-·03	·04	-·46	·10	·10	·06	-·47	·28	·20	·30	·45	—

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Table 7 : Matrx of Factorloadings For Environmental and Symptomatic variabless.

	Categories	Rotated Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Comm unality
2	Difficulty with mother.	-.3737	-.1066	.6878	.1344	-.1506	-.3273	.7636
3	Inadequate accommodation.	.4716	-.2192	-.1020	.7783	.2594	.3516	.7350
4	Interfering in the home.	-.3301	.6383	.1042	.4354	.9561	.2533	.6768
5	Family discipline.	-.2716	-.3179	.5178	.5740	.2142	.1717	.8478
6	Unhappy home.	.2918	.4906	- 2410	-.1297	.2281	.6122	.7702
7	Inadequate recreation.	-.5961	.6482	.4672	-.1640	-.1764	.5529	.1011
		-.9553	.8889					
8	Poor health.	-.7920	.5588	.4021	.3727	.8349	.2443	.9419
9	Delayed speech.	-.5961	.1124	-.6146	.1765	-.5272	.1300	.3732
10	Fear.	-.2456	-.2717	-.2091	.1097	.3111	-.33 2	.6304
11	Anger.	-.3605	-.2793	-.8993	.9550	-.7331	.2456	.7388
12	Self-assertion.	-.8423		-.7440	.5244	-.3152	.1122	.8764
13	Self-negation.		.2632	.4833	.3883	.2427	.5781	.7757
14	Animal fear.	-.7839	.1140	.1427	-.8254	.3112	-.3091	.7512
15	Teacher aversion.	.5721	.2685	.2675	-.2087	.7824	-.1350	.7069
16	Bodily movement.	.4052	-.2089	.6856	-.5685	.1894	.7204	.1042
17	Sleeping difficulties.	-.1317	.2427	.7142	.7300	-.2618	-.8457	.6900
18	Stuttering.	.1050	.6728	.7835	.1275	-.1700	-.2162	.6944
19	Nail-bitting.	.1990	-.1685	.2122	.8309	-.2565	.9222	.9266
		UNROTATED						
1	Difficulty with mother.	-·3194	.1126	.5568	·5403	-·2167	·0079	·7636
2	Inadequate accomodation.	-·3475	.4143	-.4452	·2772	·2304	-·3385	·7351
3	Interfering in the home.	-·3660	.6111	.2767	-·2797	·1093	·0263	·6748
5	Family discipline.	-·1136	.2486	-,1036	·8594	·0761	·1348	·8479
6	Unhappy home.	·4265	.6303	-.1719	-·3696	·1137	·1098	·77003
7	Inadequate recreation.	·1323	.8271	.2662	-·1829	-·3196	·3217	·111
		-·3622	.7991	.0205	-·2398	-·0513	-·3341	·9419
8	Poor health.	-·2171	.3654	·0390	-·2612	-·0455	·3475	·3732
9	Delayed apeech.	-·7504	-.1554	·0907	-·0967	-·1280	·0961	·6304
10	Fear.	·0588	.0530	-·2184	·2675	·7241	·2983	·7388
11	Anger.	-·4205	-.4469	-·5497	-·2881	·0894	·3267	·8764
12	Self-assertion.	-·5802	.0808	·0747	·1281	·3594	·5305	·7757
13	Self-negation.	-·6537	-.0144	·4457	·0925	·1530	·3052	·7512
		.0960	·2606	·1696	-·0227	-·7463	-·2089	·7070
14	Animal fear.	.8006	-.0176	·5883	·2117	-·0143	·0996	·1042
15	Teacher aversion.	-.3093	.3347	-·2965	·2474	·3169	-·4825	·6900
16	Bodily movement.	.2114	.4110	·3787	·4230	-·3670	·1542	·6949
17	Sleeping difficulties	.5118	.3374	-·5545	·0927	-·1685	·4544	·9266
8	Stuttering.	3·3078	3·1699	2·1793	1·9648	1·7604	1·5781	1·3068
19	Nail-bitting.	18·37	35·98	48·06	58·97	68·75	77·52	48·87

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EXTRACTION OF FACTORS

In oder to examine the relationship between the various categories, the data for the 'Problem' group by treated the tetrachoric method of correlation. The coefficients were calculated according to the instructions laid down by Thurstone. For each child a 'plus' rating was given in each category having a positive entry. Absence of such positive entry was indicated by 'minus' rating.

Two categories was omitted (Nos. 1 and 20) since the numbers of 'plus' ratings were very low. The tetrachoric values are shown in Table—6. This table is analyzed by means of the Thurstone Multiple Factor Technique.

The results indicated the presence of two major factors underlying the correlational values. The loadings of these factors for the various variables are shown in Table—7.

As is clear from the table no.-7, the factor analysis of intercorrelation matrix revealed six factors which explain a total of 77.52 per cent variance. The environmental group taken by itself yielded only one major factor with significant loadings on all variables except 2 (Difficulty with mother). This is confirmed fairly well by the low and negative loadings for these variables in Factor —II, Table—VII. Evidently there is a single environmental factor underlying variables 2—7 which has especially high loadings in 6 and 7 (Faculty discipline and Inadequate recreation). The analysis of the symptomatic variables taken by themselves yielded two factors isolated from the table as a whole. The significant loading are :

8 Poor health in child, 10 Fear, 11 Anger, 12 Self-assertion
13 Self-negation, 16—19 Faculty training and other difficulties.

Interpretation of the meaning of these factors must necessarily be guarded. Nevertheless, Factor—I, from the point of view of symptoms to be present in those variables which reflect emotional difficulties and inadequate development of self-tendencies. From the point of view of environment , the same factor appear to be especially prominent in the variables dealing with social inadequacies in the home. While these conclusions can only be tentative, they point to certain interesting interrelationships among the categories and to a substantiation of the point of view from which the children's history data were gathered.

Factor—I account as for 18.37 per cent variance. It has very high loadings on unhappy home, 'bodily movement' and 'nail-bitting'. The other two items on which it oas somewhat high loadings are 'sleeping difficulties' and 'stuttering'. This factor has almost zero loading on 'anger' and 'teacher aversion'. The factor has negative loading on 'fear' and animal fear,. The items on which it has high loadings seem to be related to 'unhappy home' 'poor health in child, being also a part of that.

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tFactor-II has quite loading on 'faculty discipline', 'teacher aversion' and 'inadequate accommodation', and it has fairly high loading on 'interfering in home,' 'unhappy home', 'inadequate recreation, poor health' and 'difficulty with mother.' It is negatively loaded on 'fear', 'self-assertion,' animal fear' and 'bodily movement'. The main item on which it has very high loading is 'inadequate recreation', 'poor health, and 'unhappy home.' Because the environmental factor seems to de the main thread among the items on which it has high loadings, we term it "Environmental Factor" or "Family Orientation Factor".

Factor-III has high loadings on symptomatic and slightly high loading on 'animal fear,' 'bodily movement' and 'diffculty with mother.'

It has almost zero loading on 'poor health,' delayed speech, and 'fear,' while it is negatively loaded on 'fanlty discipline, unhappy home, 'anager, self-assertion,' sleeping difficulties' and 'nail-bitting,. In the three variables of 'animal fear,' bodily movement, and 'stuttering, the concern for faimly faulty training seems to be an important items, and therefore, we have called it "Faulty Training Factor,, or "Symptomatic Factor,,. Factor-III has high loading on "faulty training' and 'other difficulties.'

SUMMARY AND CONCLUSION

Analysis of protocal histories of 60 children under ten years of age a comparison of these with similar case histories of 60 children attending Englisn-speakidg school and having no apparent problems showed the fallowing :

(1) Faulty discipline in the home, inadequate development of self-assertion and self-negation; sleeping difficulties are the common point of difference between problem and non-problem children. These categories had the greatest absolute differences in frequency.

(2) Environmental factor (faulty discipline, inadequate accommodation etc.) occurred more frequently (absolutely and relatively) in the problem children then in the non-problem children. Similarly the proportion of positive environmental catagories to positive symptomatic catigories was much higher with problem cases than with non-problem cases. Multiple factor-analysis of the tetrachronic correlations of categories yielded three major factors. Factor-I relates to unhappy home, ties of the children such as nail-bitting, sleeping difficulties and stuttering. Factor-II is prominent in the environmental categories and is especially important in the social inadequacies of the home, faulty discipline and poor accmmodation. It is present also in those symptomatic categories dealing with emotional difficulties and inadequacies of the self-tendencies. Factor-III is present in the categories related to training, such as difficulties in play.

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Studies of Values in Different Socio-Economic Group of School Boys and Girls in Kumaun Region

*G. S. Adhikari and S. Adhikari**

A sample of one hundred thirty five Boys and one hunnred forty sevan Girls of High-School belonging to High/Middle/Lower Socio-Economic groups were selected from Kumaun region for the study of values. The study of valued showed a significantly higher value in lower Socio-economic boys for the critical value than the middle and higher socio-economic group boys, while, the girls of lower socio-economic group have significantly lower economic valus than the middle and higher socio-economic group girls. The boys were found to have significantly higher economic and religious velue than the girls in lower and middle socio-economic groups respectively.

INTRODUDTION

The study of values has been primarily a philosophical task. This is particularly true value of efforts to determine the validity of values, the true relevance of objects for human need or the correctness of standard for judging such relevances. Social scientist for the most part have not believed that such truth or correctness can by solely the product of emperical observation. Thus, by and large, they have confined it as emperical variable in social life. Hence, in this effort to define value they have attempted to reframe from smuggling in hidden conceptions of true and false, valid and invalid value.

Values are things in which people are "interested". Things they want and desire to be or become feel as obligatory worship and enjoy. Values are actually a type of norm and are closely related to Attitude and Motives. Because they represent orien-

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tation lowered a gues goal according to psychological orientation. Personality and interest test have attempts to arrive at a system of human motives which may be identified as Values. *Spranger* (1923) classified values into six maior categories, namely theo. Economic, Aesthetic, Social, Political and Religious values. A test to measure values was proposed by *Allport* and *Vernon* (1931) which was improved by *Allport, Veron-Lindzey* (1951) and *Ray Chaudhury* (1958) in Indian situation. The study of value in relation to the social parameters such as sex, educ tion, creativity, intelligence, occupation and religion were made by the host of workers as *Ray Chaudhary* (1958), *Singh, Sophia and George* (1962) *Adinarayan and Raja Manik Chand* (1962) *Bhatnagar* (1963), *Khare* (1968), *Kakkar* (1972), *Verma* (1971), *Prasad and Sinha* (1972), *Rao and Pal* (1973), *Koul* (1974) *Wlliam and Brand* (1976) in *Tiwari and Singh* (1973), *Prasad and Prasad* (1977) *Child, J. L.* (1976-77) *Vasantha* (1977), *Bist* (1978), *Adhikari* (1982) *Adhikari and Khare* (1985), *Adhikari* (1986) respectively.

A review of research on the values in India reveals a vacum toward the study of values in relation to socio-economic groups. Recently Adhidari, Khare and Singh (1985) have made an study of values among professional and non-professional trainees in Kumaun region. The present study is to find out the pattern of values among boy and girl students of lower, middle and high socio-economic groups of urban area in Kumaun region.

Material and Method : The urban group of boys and giral belonging to high Schools of Nainital, Alamora, Pithoragrrh District, (Kumaun Region) were classified in three socio-economic group by using Rao's Socio-Economic Status (SES) Scale (1977), A sample of 21, 63, 51 boys belonging to High, Middle and Lower socio-economic group were respectively selected for the study. Similarly 26, 94 and 27 girls were also selected. These boys and girls belonging urban area of Kumaun Region. A revised test of Allport and Vernon study translated in Hindi (Ojha, 1971), was administered to the subjects.

RESULT AND DISCUSSION

Table 1 Mean±of Different values in Various SES groups of urban Boys.

SES group	N	Areas of Values					
		Teoritical	*Economic*	*Kesthetic*	*Social*	*Political*	*Rellgious*
I Low SES	51	43·86 ±7 65	41·21** ±6 10	30·13 ±7 55	46·11 ±7 80	47·88 ±7·50	37·45 ±7·65
II Middle SES	63	45·41 ±7 10	42·87 ±6 80	31·12 ±7 80	46·68 ±7·00	46·73 ±7 00	3969** ±8 50
III High SES	21	48·17 ±6·40	40·09 ±6 25	31·28 ±4·66	47·71 ±7·00	45·59 ±7 05	38·19 ±7·20
P-Values							
I-		NS	NS	NS	NS	NS	NS
I-	III	NS	NS	NS	NS	NS	NS
II-	III	⟋.05	NS	NS	NS	NS	NS

N : Simple Size,

** : Sign for comparison of the values between the boys and girls of same group

P : <0·05, <0·01, <0·001,

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Table-2 Mean—S.D. of Different Values in Various SES Group of Urban girls.

SES Group	N	*Areas of values* Theoritical	Economic	Aesthetic	Social	Political	Religious
I Low SES	27	44·40 ±5 50	30·11 ±4 94	30·70 ±9 40	45·62 ±8·80	47·44 ±6 15	34 40 ! 7·15
II Middle SES	94	44·87 @5 90	40·82 @6 50	31·46 @ 50	46·89 @6 70	48·17 @7 45	36·09 @9·00
III High SES	26	45·26 @5·85	41·42 @4·05	28·15 @8·65	48·92 @5 8	47·59 @5 80	37·00 @7·30
P-Value							
I-II		NS	<.05	NS	NS	NS	NS
I-III		NS	<.01	NS	NS	NS	NS
II-III		NS	NS	NS	NS	NS	NS

The mean value of Economic , Aesthetic, Social, Political and Religious values do not differ significantly in relation to Socio-economic status. While the urban boy of High socio-economic group had significantly (P, $<0·05$) higher mean value for theoretical value than the boys af lower socio-economic group (Table-1).

The girls of lower, middle and high socio-economic group, have been same value for theroritical, Aesthetic, Social, Political and Religious values. The girls of high (P, $\angle 770.01$) and middle (P, $\angle 0.01$) socio-economic group nave significantly higher mean valne for economic value than the lower socio-economic group girls (Table-2).

The boys of lower socio-economic group have singificant by higher Economic value ($P \angle 0·00$) than the girls, while boys and girls of the middle and highsocio-economic group have same value for the Economic values.

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Motivational and Reinforcement Practices Followed by the Teachers of the Faculty of Home Science, Baroda,

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The root word for motivation is 'motive',a condition that makes one to do something. In terms of instructianal technique, it is anything that a teacher does to cause a student to have interest in and excitement about a particular task. Certain conditions which follow a behavior increse the likelihood that the behavior will occur again. There conditions are called "reinforcers". The prcsent survey made an attempt to study the motivationl and reinforecement practices used by the college home science teachers of the various specialization for the theory and practical classes, assignmenis and for maintaining discipline in relation to the size of the group. Majority of the motivationai and the reinforcement practices were either most widely used. However the teachers belonging the education and extension mostly used the highest number of these practices most widely. The motivational practices used by the college home seience teachers were similar for the small and the largegroup. However the reinforcement paictices differed considerably according to the size of the group, especially assignments and for maintaining discipline.

There has been a perennial quest for teaching effectiveness. Society in general and administration in particular want maximum returns from education. Motivation is that force which gives direction and intensity to human behavior in an educational context pointing to i.e., importance in achievement.

The root word for motivation is "motive", a condition that makes one to do something. Thus, in a teaching sense, motivation can be defined as "activating a desire to learn". In terms of instructional technique, it is any thing that a teacher does to cause a student to have interest in and excitement about a particular task.

Certain conditions which follow a behavior or respons increase the likelihood that the response will occur again. The conditions which produce this effect are known as "reinforcers". The concept of reinforcement implies the correlative concept of motivation. Teacher's influence, also could be one of the motivating and reinforcing factors for the achievement of the college students because teaching is defined as an arrangement of contingencies of reinforcement under which the behavior changes.

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The influence of teacher behahior, on student's learning has drawn the attention of educationists and educational administrators during the last two decades. Various aspects of the teacher's personality and classroom behavior are being studied in the field of education at various levels. Such studies are limited in the area of home science in Indian context.

Therefore, a survey was conducted with the following specific objectives :

1. To study the motivational and the reinforcement practices use by the teachers of the Faculty of Home Science, Baroda for to theory and practical classes, assignments and for maintaining discipline.
2. To find out the differences in the motivational and the reinforcement practices followed by the teachers according to the size of the class and the area of specialization.

Methodology

Tool : A checklist containing thirty two motivational and reinforcement practices was prepared with the following five sections :

i. Motivational prartices for theory and practical classes.
ii. Reinforcement practices for theory and practical classes.
iii. Motivational practices for assignments.
iv. Reinforcement practices for assignments.
v. Reinforcement practices for discipline.

The terms motivation ad reinforcement were explained in the checklit.

Respondents :

All the teachers teaching in the Faculty of Home Science were included in the study. However, out of total 50 home science teachers, who were given the checklist., 46 teachers returned it.

Data Collection : The teachers teaching both the small and the large groups were given two checklists to be filled separately for both the groups. Code number were used to facilitate the group wise and specialization wise differentiation of checklists.

Analysis : Data were coded and percentages were calculated to find out the commonly used motivational and reinforcement practices and group wise and specialization wise differences in these practices followed by the college teachers of home science. The practices were categorized as followed :

Practices	**Percentage of respondents using the** *Practices*
Most widely used	More than 80 per cent
Widely used	Fifty to 80 per cent
Least used	Less than 50 per cent

Findings : Almost equal percentage that is one third of the respondents taught either small only, large only or both small and large group. The total percentage of teachers teaching small groups was sixty seven while for large group, it was sixty three.

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Table 1. Specialization wise Percentage Distribution of Respondents According to the Motivational Practices followed by them in Small and Large Theory and Practical Classes.

Practices	*Departments*									
	FN		*CT*		*CD*		*HM*		*EE*	
	S N=4 %	*L* N=8 %	*S* N=3 %	*L* N=7 %	*S* N=8 %	*L* N=5 %	*S* N=8 %	*L* N=5 %	*S* N=8 %	*L* N=4 %
1. Providing physical facilities	100	100	100	100	63	00	87	100	100	100
2. Declaring test results early	100	100	67	86	87	80	75	100	87	100
3. Letting stddents choose topics	75	87	67	43	100	100	63	60	87	100
4. Letting students select group members	75	87	33	71	87	60	37	40	87	75
5. Declaring difficulty level of test	25	25	33	14	63	80	25	20	37	50
6. Achievement as basis for forming groups	0	13	0	14	13	20	0	20	50	50

Motivational Practices-small and large groups of Theory and Practical Classes : It is revealed from Table 1, that providing physical facilities and declaring test results early were the most widely used motivational practices used by the college home science teachers for the small groups. Whereas, declaring difficulty level of the test and using achievement as basis for forming groups were the least used practices. Out of the total 6 practices, the total number of motivational practices, used most widely by the specialization areas of *EE, CD, FN, CT, and HM were 4, 3, 2, 1 and 1 respectively.

Providing physical facilities was the most widely used practice in teaching small groups in all the areas of specialization except child development. The practice of using achievement as basis for forming groups was totally absent for the areas of FN, CT, and HM and the percentages of the teachers from the specializations of EE and CD were 50 and 13 respectively.

The same pactices which were most widely used and least used for the small groups were also most widely and least used by the teachers for the large groups also.

However, out of the the total 6 motivational practices, the total number of practices used most widely by the areas of specializalion of FN, EE, CD, CT, and HM were 4, 3, 2, 2, and 2 respectively,

Declaring the test results early was reported by hundred per cent respondents from each of the specialization area. Unlike the teachers for the small groups, the practice using achievement as basis for forming groups was reported by the respondents from all the areas having the range of 13 to 50 per cent.

* CD—Child Development, CT—Clothing and Textiles, EE—Education and Extension FN—Foods and Nutrition, HM—Home Management.

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Reinforcement Practices—Small and Large groups of Theory and Practical Classes.

The most widely used reinforcement practices by the college home science Teachers for the small groups were :

- writing comments on the answer papers.
- giving feed back to slow learners.
- praising students presenting new ideas.
- telling best points from the answer paper of the high achievers.
- praising high achievers.
- praising participation in class discussion.

Table 2. Specialization wise Percentage Distribution of Respondents According to the Reinforcement Practices followed by them in Small and Large Theory and Practical Classes.

Practice	*Departments* FN S N=4 %	FN L N=8 %	CT S N=3 %	CT L N=7 %	CD S N=8 %	CD L N=5 %	HM S N=8 %	HM L N=5 %	EE S N=8 %	EE L N=4 %
1. Writing comments on the answer papers	100	87	100	100	100	100	87	100	100	100
2. Giving feedback to slow learners	100	100	67	86	100	100	87	100	75	100
3. Praising students presenting new ideas	100	75	67	100	100	100	87	80	100	100
4. Telling the outstanding points of answer papers of high achievers	100	87	100	86	100	80	87	100	75	100
5. Praising and congratulating high achievers	75	75	67	75	75	100	87	100	100	100
6. Praising participation in class discussion	0	63	67	86	100	100	87	100	100	100
7. Criticizing students poor work in person	25	5	133	86	75	100	62	100	87	100
8. Displaying the good products	25	75	33	100	50	40	75	80	87	100
9. Writing comments for products in practical classes	50	63	33	86	65	20	62	100	87	100
10. Asking high achivers to read out answers	1	25	33	29	38	60	87	40	75	50
11. Following test and examination by counselling session	25	13	33	14	87	4	38	60	38	540
12. Criticizing students poor work in the class	75	13	67	14	0	Nil	13	80	50	50
13. Inviting staff members of other departments	0	Nil	33	Nil	13	20	38	20	462	25

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Out of the total 13 reinforcement practices, the total number of most widely used practices according to the specialization areas of EE, HM, CD, FN, and CT were 7, 7, 6, 4, and 2 respectively. When the total number of practices is same for the areas of EE and HM, the percentages for EE area college teachers using these practices were on the whole much higher than the teachers from HM area. The least used reinforcement practices for the small group were :

- o following tests and examinations by counselling session.
- o criticising students' poor work in the class.
- o inviting staff members of other departments.

However, specialization wise picture showed that the first practice was most widely used by the teachers of the CD area while the second practice was widely used by the FN and CT areas.

The same most widely used reinforcement practices for the small groups were reported for the large groups also, besides one more practice, which was—"writing comments for the products in the practical classes".

Out of the total 13 reinforcement practices, the total number of most widely used practices according to the specialization areas of EE, CT, HM, CD, and FN were 9, 8, 7, 6 and 3 respectively. EE was the only area of specialization, from which all these 9 practices were reported by the hundred per cent of the teachers.

The reinforcement practices least used for the large groups were the same as for the small groups, besides one more practice that was—'Asking high achievers to read out same answers."

Motivational Practices for Assignments for Small and Large Groups : All the three motivational practices for the assignments were reported by the college home science teachers as most widely used practices for the small groups. The picture remained same for the FN, HM, and CD and EE areas except for the practice "including topics of assignments in tests and examination" for the EE area for which it was widely used. For the specialization of GT area all the practices were reported to be widely used only.

The overall and specialization area wise pictures for the motivational practices for the assignments for the large groups remained same as for the small groups except for the CT area of specialization for which all the practices were reported most widely used. Please see Table 3.

Table 3. Specialization wise Distribution of the Respondents According to the Motivational practices followed by them in Assignments in small and large class.

Practice	*Departments*									
	FN		*CT*		*CD*		*HM*		*EE*	
	S	*L*	*S*	*L*	*S*	*L*	*S*	*L*	*S*	*L*
	N=4	N=8	N=3	N=7	N=8	N=5	N=8	N=5	N=8	N=4
	%	%	%	%	%	%	%	%	%	%
1. Selecting topics of assignments on which reference books are available.	100	100	67	86	100	100	100	100	100	100
2. Telling the students the sources of information for a given assignment.	100	100	67	100	87	80	100	100	100	100
3. Including the topics of assignments in tests and examinations.	100	75	67	43	87	80	100	100	75	100

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Reinforcement Practices for Assignments for Small and large Groups : Table 4 shows that, only one reinforcement practice was most widely used by the college home science teachers for the assignment for the small groups. It was "writing comments on the assignment" all the rest of the 3 practices were reported to be widely used. The picture remained same for the specialization areas of CD, and EE. All the reinforcement practices were most widely used by the teachers of FN while one additional practice was reported by the teachers belonging to the areas of MH and CT.

Table 4. Specialization wise Distribution of the Respondents According to the Reinforcement Practices followed by them in Assignments in small and large classes.

Practice	*Departments*									
	FN		*CT*		*CD*		*HM*		*EE*	
	S	*L*	*S*	*L*	*S*	*L*	*S*	*L*	*S*	*L*
	N=4	*N*=8	*N*=3	*N*=7	*N*=8	*N*=5	*N*=8	*N*=5	*N*=8	*N*=4
	%	%	%	%	%	%	%	%	%	%
1. Writing comments on the assignments.	100	100	100		100	100	100	100	100	100
2. Giving one grade less for late submission.	50	87	50	86	62	80	100	100	60	100
3. Giving one grade less to the students for copying assignments	100	100	100	29	62	100	62	80	62	100
4. Asking students to read out some of the good assign ments in the class,	100	75	100	43	50	80	50	60	62	57

Giving one grade less for copying assignments was reported by the lawers percentage of the teachers over all but was reported by hundred per cent of the teachers from the FN area. Unlike the picture for the small groups, three out of four total reinforcement practices, were reported to be most widely used by the teachers for the assignments for the large groups.

The picture more or less remained same for all the specialization areas except EE, for which one practice was reported by only 29 per cent of the teachers. This practice was-"giving one grade less for copying assignments",

"Asking students to read out some good assignments" was reported by only little more than 50 per cent of the college teachers overall.

However at least 75 per cent of the teachers belonging to CD and FN areas reported this practice.

Reinforcement Practices for Maintaining Discipline in Small and large Groups: Table-5 indicates that not a single practice was most widely used but all the 6 inforcement practices were reported to be widely used by the college home science teacher for

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Table 5. Specialization wise Distributian of the Respondents According to the Reinforcen ent Practices followed by them for Discipline in small and large dasses.

Practice	*Departments*									
	FN		*CT*		*CD*		*HM*		*EE*	
	S N=4 %	*L* N=8 %	*S* N=3 %	*L* N=7 %	*S* N=8 %	*L* N=5 %	*S* N=8 %	*L* N=5 %	*S* N=8 %	*L* N=4 %
1. Giving F to the students found cheating in the examination.	75	88	67	10	50	100	100	75	75	100
2. Cutting marks grades of the students found cheating in the exam.	75	100	67	57	50	100	50	100	87	100
3. Scolding students for their irregularity in this work.	75	88	67	100	50	20	63	60	75	100
4. Keeping good discipline as a criteria for the selection of group leader.	75	88	67	88	38	20	63	100	63	25
5. Scolding late comers in the class.	25	25	67	71	63	20	50	60	75	50
6. Marking absent for late comers.	75	13	67	100	93	20	50	60	63	50

maintaining discipline among the small groups. "Keeping good discipline as one of the of criteria for selecting group leaders, was reported by the highest percentage of the teacher overall (73%), while by the hundred per cent teachers form the HM area". Marking late comers absent was reported by the lowest percentage (53%) of the college home scince teachers on the whole and only 12 per cent of the teachers belonging to CD area repoted it.

The specializationwise picture remained same as the over all. "Scolding late somers" was reported by 87 per cent of the teachers from EE area.

The findings differed substantially for the large groups. Besided the considerably different order of the reinforcement practices, out of total 6 reinforcement practices, two were reported to be most widely used. They were :

- giving 'F' for cheating in examinations.
- cutting marks/grades for cheating in the examinations.

Scolding for coming late and marking late comers absent were reported by little less than 50 per cent of the college home science teachers.

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The picture remained almost same for the various specialization with a few exceptions. While hundred per cent respondents from all the areas reported cutting of marks for cheating in examinations only 57 per cent teachers belonging to CT area reported it; and when only 12 per cent teachers from FN area marked late comers absent, hundred per cent teachers from CT area followed this reinforcement practice for discipline among the large groups.

CONCLUSIONS AND RECOMMENDATIONS

Majority of both the motivational and the reinforcement practices were either most widely or wideiy followed. However the specialization wise picture pointed to indication, that is, the teachers belonging to EE area mostly used the highest number of practices most widely and the percentages for other levels of use were also somewhat higher compared to the teachers belonging to the other areas. This may be due to the fact that the teachers belonging to EE area have strong educational psychology and teaching methodology backgrounds.

The findings regarding differences in the use of the motivational and the reinforcement practices according to the size of the group also held to from a clear generalization.

While the picture regarding the use of the motivational practices for the theory and practical classes and the assingnments remained same for the small and the large classes, the picture regarding the use of the reinforcement practices differed considerably according to the size of the group, especially for the assignments and for maintaining discipline.

The number of reinforcement practices used either most widely or widely used was higher for the large groups than the small group. Large groups are usually difficult to dealt with and this shows a special need and scope for reinforcement while dealing with the large groups.

Based on the findings, some training in motivational and reinforcement techniques is recommended to the college home science teachers belonging to the specialization that by way of their inclusion in the methodology training through the preservice or/and the in service courses. The training may emphasize the use of reinforcement for the large groups as small groups of students may not pose any threat to the teaching-learning process.

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A Comparative Study of Personality Adjustment and Achievement Motivation in Relation to Scholastic Achievement of Rural and Urban Adolescents

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INTRODUCTION

Acievement means the extent to which the learner is profitting from the instructions in a given area of learning (Crow & Crow, 1907). Academic achievement of a pupil is the knowledge attained and skills developed by him in the subject in which he is imparted training in schools and subsequent success in life. Achievement motivation is a factor in achievement that has been amply studied by Bhatnagar (1966), Rayner (1969), Desai (1970) Pattnaik (1984) and McClelland *et al.* (1976).

Personality adjustment is another factor of academic achievement studied and demonstrated by Anderson & Spencer (1953), Gulati (1979) and Sinha (1970). Human development is the by product of a complex system of variables which constantly interact with it and shape it. Academic achievement depends upon personality growth and adjustment, motivation and study habits. The present study was undertaken with an aim to study the influence of urban and rural environments upon achievement motivation and scholastic achievements of adolescents.

Objectives of the Study ; (i) To find out the impact of personality adjustment on scholastic achievement and achievement motivation of rural and urban adolescents.

(ii) To find out the scholastic achievement of urban and rural adolescents (school going) and to arrive at a conclusion as to which of these two has better adjustment.

Hypotheses of the Study : The following hypotheses have been framed for the present investigation :

(i) There exists a significant relationship between personality adjustment and scholastic achievment.

(ii) There exists a significant relationship between personality adjustment and achievement motivation.

(iii) Urban school children are better adjusted as compared to rural children.

(iv) There exists a significant difference between the urban and rural school children in the areas of personality adujstment, achievement motivation and scholastic achievement.

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Sample : The present study draws its sample from the state of Orissa comprising 100 students from the school going adolescent only. The students at time of collecting data were studying in 10th and 11th class. The sample comprised of 50 male and 50 female students. Each of male and female samples included equal proportion of students from both the urban and rural areas i. e. 25 student each of both male and female students from the urban and rural schools.

Research Tools : The following tools were employed fot the collection of data :

(i) Personality Adjustment Inventory by H. M. Bell (1934).

(ii) Achievement Motivation Scale by Deo and Mohan, (1971).

(iii) Achievement sbores octained by the students selected for the sample in their annual board examination were considered for scholastic achievement.

RESULTS AND DISCUSSION

A summary of the results obtained are presented in Tables 1 to 4 below :

Table-1 : Personality Adjustments

N=100

Urban		*Rural*	
Mean	39.42	Mean	43.52
S.D	11.42	S.D	11.72

Table-2 : Achievement Motivation

N=100

Urban		Rural	
Mean	179.69	Mean	127.80
S.D	47.40	S.D	14.96

Table-3 : Scholastic Achievement

N=100

Urban		Rural	
Mean	495 22	Mean	297.64
S.D	42.46	S.D	57.86

Table-4 : T-values showing the comparision of urban and rural adolescents on personality adjustment, achievement motivation and scholastic achievement.

Variables	Urban Mean	Rural Mean	T value	Significance
Personality adjustment	39.42	43.52	1.798	Nil
Achievement motivation	179.69	127.30	7.629	Significnt **
Scholastic achievement	495.22	297.64	14.412	Significant**

The above mentioned results show that urban adolescent are having high achievement moitvation as compared to the adolescent of rural schools.

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Academic performance of urban school children are found to be better as compared to rural adolescents.

There is no significant difference between the urban and rural school children in the achievement motivation and scholastic achievement. However, urban and rural adolescents don't differ on the variable of personality adjustment.

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Occupational Stress as a Moderator Variable of the Job Involvement-Job Satisfaction Relationship.

P. C. Mishra & A. P. Singh

In the present study an attempt has been made to find out the potential moderator effect of occupational stress on the job involvement-Job satisfaction relationship. The Occupational Stress Index developed by Srivastava and Singh (1981), the S. D. Employees Inventory developed by Pestonjee (1973), and Job Involvement Scale developed by Kapoor & Singh (1978) were administered. One sample of 400 first level Industrial supervisors of a Diesel Locomotive Works, at Varanasi. The moderated regression and sub-group analysis has been applied for determining the moderating effect. Moderated Regression analysis confirms the significant moderating effect.

Research on work involvement is comparatively recent and based on extensive contributions of empirically oriented psychologists. Research efforts concerning the concept of job involvement have clearly been on the rise lately. There are strong indications that the concept may assist in unravelling some issues in the area of work motivation (Gechman and Weiner, 1975 ; Lawler and Hall, 1970 ; Lodahil and Kejner, 1965).

Job involvement is typically related to satisfaction of intrinsic rather than extrinsic needs (Lawler and Hall, 1970 ; Weissenberg and Gruenfeld, 1968). In fact, intrinsic motivation and involvement have often been synonymously used because both Psychologists and Sociologists have assumed that a person's involvement in a job is a function of intrinsic job factors such as autonomy and the responsibility than extrinsic job factors such as pay and security. Thus, it has been suggested that where job design provided greater responsibility and autonomy on job, employees were likely to be more involved in their jobs (Herzberg, 1968, Lawler and Hall, 1970).

In recent review, Kanungo (1979) has criticised this position on the ground that satisfaction of needs on the job may be a sufficient but not a necessary condition for job involvement. He has proposed a motivational approach to the study of job involvement that argues for maintaining a conceptual distinction between intrinsic motivation and job involvement a distinction supported by the work of Lawler and Hall (1970). While satisfaction might increase the likelihood of the job involvement. it is not a definition of job involvement itself. The approach also argues that job involvement is a cognitive

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state of psychological identification with the job and depends and the degree to which the job is perceived to meet one's salient needs, be they intrinsic or extrinsic. Thus, according to this approach, individual with salient extrinsic needs will be more involved in their job as individuals with salient intrinsic needs provided they perceive their jobs to have the potential for satisfying their needs.

Weissenberg and Gruenfeld (1968) attempted to clarify the relationship between job involvement and job satisfaction by applying (Herzberg's) dechotomization of motivator and hygiene variables. Results confirmed their hypothesis which states the involvement increases with increasing satisfaction of motivator variables.

Schuler (1975) studied the relationship between satisfaction and involvement among 325 employees of a large manufacturing firm. He found positive correlation between these var ables.

Hall, Schneider and Nygren (1970) analyzed a sample of 141 professional foresters in terms of their job involvement and higher need satisfaction. Results indicate that job involvement was significantly related to satisfaction of autonomy and self fulfilment needs only.

The prior researches were based on the assumption that satisfaction is the direct cause of job involvement and performance. Porter and Lawler (1968) subsequently proposed a model in which successful performance of a task led to satisfaction. According to their model performance is linked to satisfaction, and the nature of their linkage is determined by the rewards (intrinsic or extrinsic) for performance and the perceived equity of these rewards.

Since reviews of Brayfield and Crockett (1955) and Vroom (1964) demonstratep that the relationship between job satisfaction and job performance was not so strong and also more complex than had previously been supposed, considerable research efforts have focussed on determining the conditions under which the two variables are related. The relationship may be moderated by effects of the work environment, for example, pressure to produce (Ewen, 1973); by type of reward system (Kesselman, Wood and Hagen, 1974); or by the effect of the personality of work orientation of the individual workers such as his job involvement (Wood, 1974).

There are few studies in which the moderating effect of job satisfaction and job involvement relationship have been ascertained in the India and foreign countries. Keeping in view the above, an attempt has been made to find out the moderating effect of occupational stress on the relationship between job involvement and job satisfaction.

In the present investigation occupational stress is examined as a moderator variable of the job involvement-job satisfaction relationship. It is hypothesized that occupational stress is significantly affecting the relationship between job involvement and job satisfaction by acting as a moderator variable. For this moderatad multiple regression analysis and sub-group analysis have been applied.

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METHOD

Sample : Study participants were 400 first level industrial supervisors working in the mechanical department of Diesel Locomotive works, Varanasi located in North India. The mean age of respondents was 45 years. Their average monthly income was Rs. 1,400/-. The educational attainment of the participants ranges from Intermediate to M. A. with work experience range of 10 to 20 years.

Measures : To study the variables in the present investigation the following three psychometric devices were utilized.

1. *Occupational Stress Index* : The level of occupational stress was assessed with the help of *Occupational Stress Index* developed and standardized by Srivastava and Singh (1981). The occupational Stress Index consists of 46 statements, with five alternative responses, namely *strongly agree, agree, uncertain, dtsagree* and *strongly* disagree. This Index assesses employees perceived stress arising from the twelve dimensions of job life. The dimensions are : *Role overload, Role Ambiguity, Role Conflict, Unreasonable group and Political pressure under participation, Responsibility for the persons, powerlessness, poor peer relations at work, Interinsic Impoverishment, Low status strenuous working conditions and Unprofitability.*

Index of homogeneity and internal validity of individual items had been determined by computing point biserial coefficient of correlation (*rpb*). The values of *rpbis* range. ·36 to ·59. The internal consistency of the test determined by computing odd-Even method was found to be. 935 (corrected by S. B. Formula). The Index of reliability was also ascertained by computing cronbach's alpha coefficient which was found to be (r=.90).

2. *Satisfaction measure* : The S.D. Employees Inventory developed by Pestonjee (1973) has been administered to assess the job satisfaction of the supervisors. It includes four areas namely, *job management, social relations, and personal adjustment.* All the 80 items of the inventory are framed in the form of interrogatory statements which could be responded in terms of 'Yes' or 'No'. The areawise split-half-reliability coefficient are found to be .99 for job., .99 for management, ·98 for social relations and ·98 for personal adjustment (Pestonjee, 1973).

3. *The Job Involvement Measure* : The Job Involvement Scale as developed by Kapoor and Singh (1987) has been used to find out the levels of employee's job involvement. The scale comparises of 20 items with four response alternatives for each items, namely, strongly agree, agree, disagree, strongly disagree. The alpha-coefficient technique was applied to find out the reliability of the scale which was found to be ·82. The index of homogeniety and internal validity of the scale were tested by computing the point biserial correlation (*rppi*). Product moment correlations were run among the items and the matrix thus obtained has been facrorized using the principal component-method. The factors has been related by 'Varimax Technique.'

Analysis : Moderated regression analysis was used to determine the moderator effects of occupational stress on job satisfaction, job-involvement relationship. The sub-group analytical strategy has also been used in the present investigation. According to

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Zedeck (1971), a moderator effect is present when the independent predictor model and the moderated regression model are both differ significantly from the zero order correlations and additionally are significantly different from each other. Also in this present study, the coefficient of correlation among job satisfaction and job involvement have been computed.

RESULT AND DISCUSSION

Moderated Regression Analysis : The zero order correlation between job satisfaction and job involvement is found to be ·142. When job involvement is predicted using both job satisfaction and occupational stress, R increases to, ·15, $F(2.\ 397)=4{\cdot}342$, $P<{\cdot}05$. When we add job satisfaction a occupational stress interaction term, the increased R is found to be ·18, which is singnificant beyond ·05 level ($F=4{\cdot}349$, df$=3{\cdot}396$). The difference between the two multiple correlations is found to be statistically significant ($F=4{\cdot}500$ df$=1{\cdot}396$).

Table-I : Hierarchical *mrc* analysis for criterion (y)-predictors (x_1 and x_2) and Moderated regression model (x_1, x_2 and x)

	RY	*F Value*	*df*	*P*
X_1	0·14	8·190	1.398	·01
X_1, X_2	0·15	4·342	2.397	·05
X_1, X_2, X_3	0·18	4·349	3.396	·05

Table-II : Significance of difference between zero order and independent predictor, model and between independent predictor model and moderated regression model.

	Cum R^2Y	*Increment*	*F-Value*	*df*	*P*
X_1	0·020	0·020	8·190	1·398	·01
X_1, X_2	0·021	0·001	0·405	1·397	NS
X_1, X_2, X_3	0·032	0·011	4·500	1·396	·05,

X_1 = Job satisfaction, X_2 = Occupational stress X_3 = Interaction (occupational stress X Job satisfaction), Y = Job Involvement.

Sub-group Analysis :

Table-III : Relationship between Job-satisfaction and Job involvement for total sample and sub samples.

Nature of sample	*r*	*t-value*	*P*
Entire sample (N=400)	0·14		
High occupational stress (N=191)	0·069	1·54	N.S.
Low occupational stress (N=209)	0·224		

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In sub-group analysis the data were first analyzed using Product moment Correlation for the entire sample. The results shown in Table III indicate that before occupational stress effects were considered, job satisfaction and job involvement was significantly related with each other. When the sample was divided into high and low group-based on occupational stress score, non-significant relationship between two variables has been obtained for high occupational stress group whereas it was found to be significant for low occupational stress group. The difference between correlations of high and low occupational stress groups was not found to be significant. Thus, the result of sub-group analysis does not confirm our hypothesis.

But better insightment Multiple Moderated regression analysis is applied for determing the moderating effect.

On basis of the moderated regression analysis the *F*-value is not significant between zero-order and independent predictors but significant *F*-value is found between independent predictors and moderated regression model. It indicates that occupational stress is significantly affecting the relationship of job satisfaction and job involvement. Thus occupational stress has moderating effect upon the job satisfaction and job involvement relationship. Kesselman, Wood and Hagen (1974) point out that a partial overlap in the two reward system may reduce the observed difference. The relationship of two group. Self-esteem has been reported as a significnt moderator of the relationship between performance and intrinsic satisfaction but not for performance and extrinsic satisfaction (Inkson, 1978),

In summary, the occupational stress appears to represent an important moderator variable in the job satisfaction-job involvement relationship. Although the sub-group analysis does not confirm our hypothesis but the Moderated Multiple regression analysis has proved our hypothesis that is occupational stress has a moderating effect of the job involvement-job satisfaction relationship.

Further research is needed which specifies in detail the effects of personals by characteristics, different job settings, subject samples and the measures of job involvement and satisfaction on the causal relationship between satisfaction and involvement.

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"Academic Performance as a Function of Dependence Proness and Sex"

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The present study was desiged to investigate the influence of dependence-proneness and sex on academic performance. A 2×2 factorial design in which two independent variables, namely, dependence-proneness and sex each varying in two ways, was used. 40 male and 40 female under-gradate students of Aligarh Muslim University served as subjects. Dependence-Proneness Scale developed by Sinha (1968) was used to measure the strength of dependence-proneness. The academic performance of each group of subjects was assessed by examining the previous academic records of the subjects.

ANOVA clearly revealed that academic achievement is negatively related to dependence-proneness, i. e. high dependent prone students, irrespective of their sex, showed poorer academic achievement than their low dependent counterparts. Furthermore, female students were found poorer in academic achievement than male students. Thus, the main effects of dependence proneness and sex on academic achievement were found significant. Although the interactional effect of dependence-proneness and sex on academic achievement was found insignificant. The results were interpreted in terms of attitudes and motives involved.

INTRODUTION

It has been observed by Murphy (1953), Sinha (1968), and Pareek (1968) that Indian people do not seem to respond to the measures directed to improve their living conditions. They not only refuse to challange the old disfunctional values and practices, and to take the initiative to adopt new ways which are conductive to the economic growth but also fail to utilize the opportunities extended to them. This apathy has been a continuing worry in the minds of planners and social scientists. A number of psychological constructs have been advanced in order to explain such apathy. The psychological construct that seems quite revealing is the dependence-proneness.

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Dependence-proneness is operationally defined as a motivational habit of over dependence on others in situations in which dependency is not necessarily called for. It is not clever strategy to win over a situation nor a mean to achieve some useful purpose rather it is a tendency or an inner inclination to run to others without exhausting one's own resources. Thus, Sinha (1968) observed that dependence-proneness involves excessive amount of dependency which propells a person to seek advice, support, and affection from others in situations where it may not be necessarily required. In subsequent study, Sinha and Pandey (1972) have reported that a high dependent-prone versons hesitates, asks for all kinds of informations and commissions. He is further described as one who is anxious, fatalist, impractical, and traditional. Alam (1985) also found that dependence-proneness inhibits learning performance and impairs retention. These characteristics of dependent-prone persons suggest that they are cognitively less developed than their counterparts. In view of these characteristics of dependent-prone persons, it is reasonable to assume that dependent-prone persons should show poorer academic performance than their counterparts. The present study is designed to test this assumption.

Another consideration that influenced the thinking of the authors is the fact that boys and girls over since birth are treated differentially Boys are encouraged to be assertive, independent, and aggressive. Girls, on the other hand, are reared in such a way as to be made dependent financially and emotionally. Belier (1957), for instance, found that girls were more dependent than boys on the five measures of dependency, Similarly, Chadha (1984) reported high degree of dependence-proneness among girls than among boys. In subsequent study, Chadha and his associate (1985) found that boys achieved significantly higher than girls on academic achievement.

In view of the foregoing discussion, it is also reasonable to assume that girls, being more dependent-prone than boys, should show poorer academic performance than boys. The present study also attempts to test this hypothesis. More specifically, present research is designed to investigate the influence of dependence-proneness and sex on academic performance.

METHOD

Design : A 2×2 factorial design in which two independent variables, namely, dependent-proneness and sex each varying in two ways, was used. The degrees of dependent-proneness were (a) highly dependent and (b) least dependent ; sex was varied by selecting (a) male and (b) female students. Thus, there were four groups of subjects, namely (i) male highly dependent, (ii) male least dependent, (iii) female highly dependent and (iv) female least dependent.

Subjects : In order to form four groups of subjects mentioned above, 150 male and 150 fomale undergraduate students of A. M. U. were randomly selected from the faculties of Social Sciences and Arts. These two groups of male and female subjects were given Sinha's (1968) Dependence-Proneness scale (DPS). The subjects scoring more

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than 70 (Q^3) and those scoring below 62 (Q^1) on DPS constituted high and low dependent group, respectively. Thus these were four groups, each group consisted of 20 subjects. All the subjects, irrespective of their group assignment, were metched in respect of age, Income, inhabitation and social background.

Instrument : Dependence proneness was measured by the Dependence proneness developed by Sinha (1968). The Scale consists of 20 items describing depending behaviour. It is a 5 point scale ranging from quite true (5) to not true at all (1) with undecided (3) in the middle. The subjects scores will have the possible range of 20-100. In this system of scoring the large the score, the greater is the degree of dependence proneness.

Academic performance of the subjects was assessed by recording their average performance in the two examinations (Promotional and Final year examination).

Procedure : The data were collected by administering Sinha's (1968) Dependence-Proneness Scale in a small group of 20 subjects in classroom situation. The subjects were properly instructed to read, judge, and endorse each item of dependence-proneness scale on five points. Scoring was done as per instructions given in its respective manual. Average scores of marks for each student were computed on the basis of promotional and final year results.

RESULT AND DISCUSSION

The mean marks obtained by high and low dependent boys and girls are given in Table-1 and their *F*-ratios in Table-2.

Table 1 : Showing mean marks obtained by four groups of subjects.

Groups	*Boys*	*Girls*	*Mean*
High-dependent	225·5	218·5	222·0
Low-dependent	231·5	227·5	229·25
Mean	228·25	223·0	

Ignoring sex, the table-1 reveals that the means for high dependent group is 222·0 while the mean of the means for low dependent group is 229·25. Since the former mean is much lower than the latter mean, it may be inferred that dependence proneness has deterimental effect on academic performance. It may be observed in table-2, the *F*-ratio for dependence-proneness is 4 86 which is significant at ·05 level. It is, therefore, concluded that dependence-Proneness has inhibitory effect on academic performance.

Ignoring dependence-proneness, we find in table-1 that the mean of the means for male subjects is 228·25 while the means of the mean for female subjects is 223·0. Since the former mean is greater than the latter mean, it may be suggested that female subjects show poorer academic performance than male subjects.

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Table 2 : Showing ANOVA for 2×2 factorial design.

Source of Variation	*Sum of Squares*	*df*	*Mean Square*	*F-ratio*
Dependence-Proneness (DP)	1102·2	1	1102·2	4·86*
Sex (S)	906·4	1	206·4	4·00*
DP×S	156·0	1	156·0	0·68-
Within group (Error)	17208·0	76	226·4	
Total	1937?·6	79		

* Significant at ·05 level

— Not significant.

It is evident from Table-2 that the *F*-ratio for sex variation is 4·00 which is also significant at ·05 level. It may, therefore, be concluded that sex has differential effect on academic performance, i. e. female subjects show poorer academic performance than male subjects. Although interactional effect of dependence-proneness and sex is found insignificant ($F=0·68$; $P=$NS). The result demonstrates that there no interactional effect of dependence-proneness and sex on academic performance.

Thus, the findings of the study may be summarized as (i) high dependent subjects show poorer academic performance and low dependent subjects (ii) male subjects show better academic performance than female subjects and (iii) there is no interactional effect of dependence-proneness and sex on academic performance.

Dependence-proneness, as mentioned elsewhere, makes an individual to run to others without exhausting one's own resources. It may express itself in one or more ways such as (a) to seek support and or order from others, (b) to confide with others uncriteally (c) desire to be encouraged, helped and or protected by others. He is one who is anxious fatalist, impractical and traditional (Sinha and Pandey, 1972). In the light of these characteristics of dependent-prone persons, the finding of the present study is in expected direction. It is evident from these characteristics of dependent-prone persons that they are cognitively less developed and consequently they show poorer academic performance than independent persons. Dependence-proneness not only inhibits academic performance but also impairs retention (Alam, 1985). These findings, therefore, led the authors to suggest that excessive dependency among students should be eradicated so that they can more confident and reach greater heights. Since guidence and councelling enable the individual to cope with his problems, it appears that counsellors can help students to overcome their excessive dependency.

The second finding of the present study, i.e, boys show better academic performance than girls is in agreement with those obtained by Ameerajan (1980) and Chadha *et. al.* (1985) who reported teat boys achieved significantly higher than girls on academic achievement.

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The difference among boys and girls with regard to their academic performance may be interpreted in terms of attitude and motivation involved. It may be possible that boys and girls have different attitudes and motives towards education. It is quite possible that boys education may be job-oriented. Males in our culture are the earning members of families and thus they might have looked at the value of education in the context of getting job, or making the career which has not been the case with females. To get a good job one has to work hard to secure good marks in one's academic carrier. Thus, this difference in their attitudes toward education might be responsible for a significant difference in their academic performance. However, further research on this issue is required with substantially larger sample of male and female subjects so that the issue may be settled beyond any doubt.

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A Comparative Study of Married and Unmarried College Techers on Teaching Aptitude

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INTRODUCTION

Teaching aptitude has attracted many psychologists A good deal of work has been done by Morsch and Wilder (1954), Howsam (1960), Shah (1963), Srivastava (1965), Pundlik (1973), Upadhyay (1975) Aucter normaholmes (1977), Baughman Harry (1977), Bond (1978), Giggleman (1978) and Tiwari (1984). In India, studies on college and university teachers are very rare. Present investigation deals the study of the difference in teaching aptitude of Male, Female married and unmarried college teachers.

Methodology : For the present study, it has been hypothesised that :

(a) There exists no significant difference in the teaching aptitude of married and unmarried college teachers.

(b) There exists no significant difference in the teaching aptitude of Male and Female college teachers.

Sample and Tool : The sample for the study, consisted of 100 college teachers (married=50, unmarried=50), of both male and female sex. They were selected from different colleges. The tool adopted for the present investigation was "Teaching Aptitude Test for College Teachers", constructed and standardised by author 1984). This test includes following ten subtests :

(1) Knowledge of Subject Matter. (2) Fairness, (3) Sincereity (4) Faith in Democratic and Co-operative way of Teaching (5) Optimism (6) Strong character, (7) Flexibility, (8) Ability to make class Interesting, (9) Emotional and Social Adjustment (10) Scholarly Test.

RESULT AND ANALYSIS

Raw scores of the test were tabulated and mean, standard deviation were calculated. To find out the significance of difference between means the G. R. Values were worked out. The quantitative results are given below :

Table-1 : Comparison of Teaching Aptitude Scores between Married and Unmarried Teachers.

Group	M	N	SD	SE_m	T-Value	Level of Significance
Married	299·90	50	27·52	3·93		
Unmarried	290·10	50	26·63	3·81	0·512	Not Significant at ·05 level

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It is apparent from Table-1 that the mean teaching aptitude scores from married teachers is high (292·90) than unmarried group (290·10). The difference between mean is 2·8 and *t* value is 0·512 which is not statistically significant at ·05 level, showing that there exists no difference in teaching aptitude of married and unmarried college teachers. Morsch and Wilder (1954) observed that there is no difference between married and unmarried teachers when classroom effectiveness is compared. Howsam (1960) also reported that there is nodifference between married and unmarried men. But his study indicates a slight favour for married women.

Sex-wise Analysis : To find out the difference between teaching aptitude of Male and female teachers, '*t*' test has been used. The quantitative results are given below in the table-2.

Table-2 : Sex-wise comparison of Composite Teaching Aptitude scores.

Sex	N	M	SD	SE m	*T*-Value	Significance Level
Male	50	293·40	22·17	3·17	0·197	Not significant
Female	50	294·30	27·71	3·96		

A persual of Table - shows that mean composite teaching aptitude score for female group is high (294·30) than male group (293·40). The obtained '*t*' value 0·197, is not statistically significant, showing that there exists no difference in teaching aptitude of male and female college teachers, this finding is in greement with the findings of Morsch and Wilder (1954), Upadhyay (1970) also, in his study on "Teaching aptitude in relation to Sex", reported that there exists no difference in teaching aptitude of male & female teachers.

CONCLUSION

The rusult of the present study indicates that there is no difference between married and unmarried teachers when teaching aptitude is compared i. e. Marital status has no relation with teaching aptitude. Sex differences failed to appear significantly as teaching aptitude is concerned.

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Sex Difference in Social Attitudes of Santal High School Students

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The present stxdy was underaken to examine the sex difference in social attitudes of Santal high school 9th and 10th grade students. For this, 100 girls and 100 boys were adminstered Singh Social Attitude Scale which measures attitudes towards religion, caste, family, woman, social custom and politics. It was found that girls are more modern in their attitudes towards caste, family and woman but more traditional in their attitude towards religion than boys. The results have been explained in the context of social environment of Santals.

INTRODUCTION

Santals are one of the important tribes of India. They live in the vast hilly areas of Bihar, West Bengal and Orisa. Their concentration is rather thick in Santal Parganas which lies on the eastern side of Bihar. Santal roughly resemble Dravidians. They speak Santali in their homes. But like other students of Bihar they also get their education through the medium of Hindi. Santals are orthodox, traditional and conservative (Archer, 1975 ; Bhowmik, 1971 ; Jha, 1986 , Prasad, 1972). Several past studies have reported sex differences in social attitudes (Barling & Fincham, 1979 ; Cattell, 1956 ; Dutt, 1965 ; Ekehammer & Sidanius, 1982 ; Feather, 1979 ; Feldman, 1975 : Kulandaivel & Jacob 1964; Tandon, 1967). This study planned, therefore, to see if there exists any sex was difference in social attitudes of Santal students.

Sample : The sample consisted of 100 Santal boys and 100 Santal girls of 9th and 10th classes of four high schools of Santal Parganas located at Murli, Brindaban, Barhat and Dudhani. The mean age of boys was 16 years and the mean age of girls was 15 75 years. All Santal students came from lower social strata and rural areas. The chief occuption of most of their parents was cultivation.

Procedure : Social attitudes of the students was measured by Social Attitude Scale (Hindi) developed by Singh (1978). The scale had been standardized on the Santals as well as non-Santal students. This is a Likert type five point scale which measures attitudes coward religion, family, caste, woman, social custom and politics. The scale altogether bonsists of 120 statements with 20 statements in each sub-scale. The alternative responses to each statement range from 'strongly agree,' to 'strongly disagree' with 'undecided' in the middle. The split-half reliability efficients of the sub-scales ranged from ·77 to .84 and their temporal stability coefficients ranged from .77 to .84

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Subjects were instructed to read each statement carefully and express their opinion by chosing any of the five responses printed against each statement. Hsgh score on each sub scale indicated modern attitude and low score indicated traditional attitude.

RESULTS

The mean attitude scores towards religion, caste. family, woman, social custom and politics were computed for santal boys and girls separately and the significance of differences between them were determined by *t*-test. The statistics for the two groups appear in Table-1.

Table-1 : Mean Attitude Scores of Santal Girls and Significances.

Social attitude Sub-scales	Santal Boys $N=10$.		Santal Girls $N=100$		t
	Mean	SD	Mean	SD	
Religion	52.20	7.73	49.86	8.55	2.33*
Caste	57.82	9.99	61.28	11.57	2.72*
Family	57.90	6.63	60.33	9.18	2.15*
Women	49.84	7.57	53.69	9.37	3.20*
Social Custom	53.66	5.97	55.44	8.14	1.76
Politics	69.23	6.43	70.22	8.88	0.90

* $p < .01$, * $p < .05$

From Table-1 it may be noted that Santal boys as compared to Santal girls have obtained higher mean attitude score in respect of religion (52.20) against (49·86) and the difference is statistically significant ($t=2.03$, $p < .05$). However comparison of mean scores of boys and girls in respect of other attitudes present altogether a different picture. Santal girls as compared to boys have obtained higher mean scores in respect of cast (61 28 against 57.12, family (60.33 against 57.90), woman (53.69 against 49.34), social custom (55.44 against 53.66) and politics (against 69.23). However the differences are statistically significant in respect of caste (2.72, $p < .01$), family ($t=2.15$, $p < .05$) and woman ($t=3.20$ $p < .01$) only. Differences are not significant in respect of social custom ($t=1.76$) and politics ($t=0.90$).

DISCUSSION

The results have revealed that Santal high school girls show relatively modern attitude towards caste, family and woman but traditional attitude towards religion as compared to their boy counterparts. The finding is however, not consistent with several

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past observations that females in general are more conservative than males (Feather, 1979 ; Cattell, 1956 ; Jha, 1986 ; Ray, 1959). But it is supported by one study made recently by Ekehammer and Sidanius (1982) on Swedish high school students regarding various aspeits of socio-political ideology. Pemale were found to be less generally conservative, less capitalist oriented, less punitive, more egalitarian, less racist but more traditional in religious matters than males. There are studies from other parts of the world too to support that females are more traditional in their attitude towards religion (Barling and Fincham, 1979 ; Dutta, 1965 ; Kulandaivel & Jacob, 1964 ; Tandon, 1979).

The results obtained can be accounted for by the social environment of Santals. Santal women are more concerned with the observance of religious rituals and festivals than men. As such their proneness towards tradition bound religiosity increases. In Santal society there are no castes but clans and inter-clan marriages are permitted. In this context boys and girls should not differ. But it appears that Santal boys tend to carry the influence of their non-tribal Hindu bretheren where superiority or inferiority of castes is much emphasized. Girls, on the other hand, appear to carry little influence of the caste system of non-tribal living in the adjacent areas. Relatively modern attitude of Santal girls towards family indicates their greater preference for nuclear family as against join household. It appears that like other woman they have also a general tendency to be free from the restrictions and control of in-laws in the family and to enjoy independence in the company of husband. Santal girls display modern attitude towards woman because they feel that women should be given equal rights with that of men. Santal society is patrimonial and patrilineal where woman is considered intrinsically inferior to man. This appears to produce reactions in the Santal girls and consequently they feel concerned about women's rights and status. Santal boys express traditional attitude towards woman, perhaps because they feel that ther privileged position should continue in Santal society.

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Book Review

The Psychological Consequences of Crowding.,

by

Uday Jain.

New Delhi : Sage Rs. 95/-tPP 142

Population explosion, Urban decay, eco-cultural break-down and environmental distress are some of the foremost problems of modern times. Probably, planning cannot succeed unless scientific and realistic appreciation of these, along with reasonable attempts to analyze and solve them are attempted. This work is a fine illustration of a systematic study of crowding and its psychological consequences. As a significant work in applied social psychology it portrays an original angle in selection of the theme, problem and experimental methodology and analysis of a hither to neglected area of human concern by the psychologists. Even if one may not completly agree with the selection of measures and the population, nobody can ignore the fact that for a healthy, developing and productive society of future the inferences of such studies cannot be ignored. The social behaviours, and the feelings of crowding experienced and consequent effects on mental health, interpersonal relations and personal life space of people are so well brought out that one wishes that the researcher produces more work on other urban rural areas and the planners of this country take due note of it to avoid future disasters and decays. Sage is becoming another name for quality publications. I find this work is to be very relevant and needful to the planners, geographers, social psychologists and the environmentalists.

Dear Teacher" : The gifted child needs you. 1977.

by

Sujatha A. Krishna Rao,

Sujatha : Secunderabad. Rs· 60 PP. 178.

In more than one way this is a remarkable book by a young scholar who has the expression, research and determination. The title speaks volumes for the relevance of this work to the 'dear teacher.' The illustrative style and the softness of language make it charming and the hidden hand of the master (EGP) makes it full of creative exposition.

The chapters on the loss of the Gifted Child, who is the Gifted child, characteristics & Problems of the Gifted Child, Identifying the Gifted Child, Special Eduction for the Gifted and the Conclusion are certain informal divisions of a material which is informative and stimulating. In a particular way, this book deserves a place in each house, school and university department because of its simplicity, in style relevance to the human resource development and authority based on research data. Reasonably priced, it scores another plus for being published by the author herself. (115 Osmania, Teachers Colony, Secunderabad, '00594).*

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